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 NEWS  2          "Ask CAS" for self-help around the clock
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 NEWS  4  APR 04  STN AnaVist $500 visualization usage credit offered
 NEWS  5  MAY 10  CA/CAplus enhanced with 1900-1906 U.S. patent records
 NEWS  6  MAY 11  KOREAPAT updates resume
 NEWS  7  MAY 19  Derwent World Patents Index to be reloaded and enhanced
 NEWS  8  MAY 30  IPC 8 Rolled-up Core codes added to CA/CAplus and
                  USPATFULL/USPAT2
 NEWS  9  MAY 30  The F-Term thesaurus is now available in CA/CAplus
 NEWS 10  JUN 02  The first reclassification of IPC codes now complete in
                  INPADOC
 NEWS 11  JUN 26  TULSA/TULSA2 reloaded and enhanced with new search and
                  and display fields
 NEWS 12  JUN 28  Price changes in full-text patent databases EPFULL and PCTFULL
 NEWS 13  JUl 11  CHEMSAFE reloaded and enhanced
 NEWS 14  JUl 14  FSTA enhanced with Japanese patents
 NEWS 15  JUl 19  Coverage of Research Disclosure reinstated in DWPI
 NEWS 16  AUG 09  INSPEC enhanced with 1898-1968 archive
 NEWS 17  AUG 28  ADISCTI Reloaded and Enhanced

 NEWS EXPRESS  JUNE 30 CURRENT WINDOWS VERSION IS V8.01b, CURRENT
               MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
               AND CURRENT DISCOVER FILE IS DATED 26 JUNE 2006.

 NEWS HOURS    STN Operating Hours Plus Help Desk Availability
 NEWS LOGIN    Welcome Banner and News Items
 NEWS IPC8     For general information regarding STN implementation of IPC 8
 NEWS X25      X.25 communication option no longer available

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=> file medline embase biosis caplus
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                     0.21       0.21
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=> S (IGF(W)2 OR IGF(W)II OR INSULIN(W)LIKE(W)GROWTH(W)FACTOR(W)II)
L1        25106 (IGF(W) 2 OR IGF(W) II OR INSULIN(W) LIKE(W) GROWTH(W) FACTOR(W)
                II)

=> S L1 AND (TGF-B OR TGF(W)B OR TGF(W)BETA OR
TRANSFORMING(W)GROWTH(W)FACTOR(W)BETA)
L2         1906 L1 AND (TGF-B OR TGF(W) B OR TGF(W) BETA OR TRANSFORMING(W)
                GROWTH(W) FACTOR(W) BETA)

=> S L2 AND (CIM6P(W)RECEPTOR or
cation(w)independent(w)mannose(w)6(w)phosphate(w)receptor)
L3           12 L2 AND (CIM6P(W) RECEPTOR OR CATION(W) INDEPENDENT(W) MANNOSE(W
                ) 6(W) PHOSPHATE(W) RECEPTOR)

=> dup rem l3
PROCESSING COMPLETED FOR L3
L4            4 DUP REM L3 (8 DUPLICATES REMOVED)

=> dis ibib abs l4 1-4

L4   ANSWER 1 OF 4     MEDLINE on STN                    DUPLICATE 1
ACCESSION NUMBER:    2004251320     MEDLINE
DOCUMENT NUMBER:     PubMed ID: 15085180
TITLE:               Structure of uPAR, plasminogen, and sugar-binding sites of
                     the 300 kDa mannose 6-phosphate receptor.
AUTHOR:              Olson Linda J; Yammani Rama D; Dahms Nancy M; Kim Jung-Ja P
CORPORATE SOURCE:    Department of Biochemistry, Medical College of Wisconsin,
                     Watertown Plank Road, Milwaukee, WI 53226, USA.
CONTRACT NUMBER:     DK42667 (NIDDK)
                     RR07707 (NCRR)
SOURCE:              The EMBO journal, (2004 May 19) Vol. 23, No. 10, pp.
                     2019-28.  Electronic Publication: 2004-04-15.
                     Journal code: 8208664. ISSN: 0261-4189.
PUB. COUNTRY:        England: United Kingdom
DOCUMENT TYPE:       Journal; Article; (JOURNAL ARTICLE)
LANGUAGE:            English
FILE SEGMENT:        Priority Journals
OTHER SOURCE:        PDB-1Q25
ENTRY MONTH:         200507
ENTRY DATE:          Entered STN: 20 May 2004
                     Last Updated on STN: 19 Dec 2004
                     Entered Medline: 14 Jul 2005
AB   The 300 kDa cation-independent mannose
     6-phosphate receptor (CI-MPR) mediates the
     intracellular transport of newly synthesized lysosomal enzymes containing
     mannose 6-phosphate on their N-linked oligosaccharides.  In addition to
     its role in lysosome biogenesis, the CI-MPR interacts with a number of
     different extracellular ligands at the cell surface, including latent
     transforming growth factor-beta,
     insulin-like growth factor-
     II, plasminogen, and urokinase-type plasminogen activator receptor
```

(uPAR), to regulate cell growth and motility. We have solved the crystal structure of the N-terminal 432 residues of the CI-MPR at 1.8 A resolution, which encompass three out of the 15 repetitive domains of its extracytoplasmic region. The three domains, which exhibit similar topology to each other and to the 46 kDa cation-dependent mannose 6-phosphate receptor, assemble into a compact structure with the uPAR/plasminogen and the carbohydrate-binding sites situated on opposite faces of the molecule. Knowledge of the arrangement of these three domains has allowed us to propose a model of the entire extracytoplasmic region of the CI-MPR that provides a context with which to envision the numerous binding interactions carried out by this multi-faceted receptor.

L4 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:173771 CAPLUS
DOCUMENT NUMBER: 138:201350
TITLE: Regulation of cytotrophoblast cell differentiation and cell migration
INVENTOR(S): Roberts, Claire; Owens, Phillip
PATENT ASSIGNEE(S): The University of Adelaide, Australia
SOURCE: PCT Int. Appl., 46 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003018781	A1	20030306	WO 2002-AU1226	20020830
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2458972	AA	20030306	CA 2002-2458972	20020830
EP 1432790	A1	20040630	EP 2002-766939	20020830
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
US 2005100549	A1	20050512	US 2004-789105	20040227
PRIORITY APPLN. INFO.:			AU 2001-7331	A 20010830
			WO 2002-AU1226	W 20020830

AB The present invention is predicated on the discovery of certain interactions between cellular growth factors and opposing actions that control differentiation and migration or invasion of cytotrophoblasts into the uterine endometrium during pregnancy. Insulin-like growth factor II (IGF-II) and latent transforming growth factor beta (TGF.beta.), the inactive precursor of TGF.beta., complete for binding to the cation-independent mannose-6-phosphate (CIM6P) receptor . IGF-II prevents latent TGF.beta . binding to the CIM6P receptor. The invention therefore offers a method of regulating and directing cytotrophoblast differentiation and function based on the interaction between IGF -II, latent TGF.beta. and the CIM6P receptor. There is disclosed a method of regulating cytotrophoblast and stem cell differentiation and migration characterized by adjusting levels of insulin-like growth

factor II (IGF-II) available for binding to the cation-independent mannose-6-phosphate (CIM6P) receptor. The discovery may be applied to embryonic or adult stem cells to control their differentiation and migratory behavior.

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 3 OF 4 MEDLINE on STN DUPLICATE 2
ACCESSION NUMBER: 2003040204 MEDLINE
DOCUMENT NUMBER: PubMed ID: 12547403
TITLE: The hepatocyte is a direct target for transforming -growth factor beta activation via the insulin-like growth factor II/mannose 6-phosphate receptor.
AUTHOR: Villevalois-Cam Laurence; Rescan Claude; Gilot David; Ezan Frederic; Loyer Pascal; Desbuquois Bernard; Guguen-Guillouzo Christiane; Baffet Georges
CORPORATE SOURCE: INSERM U522, Unite de Recherches Hepatologiques, IFR 97, Hopital Pontchaillou, 35033 Rennes, France.
SOURCE: Journal of hepatology, (2003 Feb) Vol. 38, No. 2, pp. 156-63.
Journal code: 8503886. ISSN: 0168-8278.
PUB. COUNTRY: England: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200308
ENTRY DATE: Entered STN: 28 Jan 2003
Last Updated on STN: 9 Aug 2003
Entered Medline: 8 Aug 2003

AB BACKGROUND/AIMS: The cation-independent mannose 6-phosphate receptor (CIMPR) is overexpressed in hepatocytes during liver regeneration and has been implicated in the maturation of latent pro-transforming growth factor beta (TGFbeta). In this study, we have: (1) kinetically characterized the changes in CIMPR expression in regenerating liver and cultured proliferating hepatocytes; and (2) assessed the contribution of hepatocyte via the CIMPR to latent pro-TGFbeta activation. METHODS: The expression of CIMPR protein and mRNA in livers collected after partial hepatectomy and hepatocyte primary cultures was analyzed by Western and Northern blotting. Activity of latent pro-TGFbeta was assessed by inhibition of [3H] methylthymidine incorporation into DNA. RESULTS: The expression of the CIMPR protein and/or mRNA progressively increased after 8 h in regenerating liver and 42-46 h in cultured hepatocytes, prior to the onset of DNA replication. Both mature TGFbeta and latent pro-TGFbeta inhibited epidermal growth factor-stimulated DNA synthesis in hepatocytes in a dose-dependent manner. The effect of latent pro-TGFbeta was reversed by two ligands of the CIMPR: beta-galactosidase, a mannose 6-phosphate containing protein, and a CIMPR antibody. CONCLUSIONS: (1) The induction of the CIMPR gene during liver regeneration and hepatocyte culture occurs in mid G1 phase; and (2) the CIMPR mediates latent proTGFbeta activation and thus may act, by targeting TGFbeta to hepatocytes, as a negative regulator of hepatocyte growth.

L4 ANSWER 4 OF 4 MEDLINE on STN DUPLICATE 3
ACCESSION NUMBER: 91299801 MEDLINE
DOCUMENT NUMBER: PubMed ID: 1966041
TITLE: Binding of insulin-like growth factor II (IGF-II) by human cation-independent mannose 6-phosphate receptor/IGF-II receptor expressed in receptor-deficient mouse L cells.

AUTHOR: Nolan C M; Kyle J W; Watanabe H; Sly W S
CORPORATE SOURCE: Edward A. Doisy Department of Biochemistry and Molecular Biology, St. Louis University School of Medicine, Missouri 63104.
CONTRACT NUMBER: DK 40163 (NIDDK)
GM 34182 (NIGMS)
SOURCE: Cell regulation, (1990 Jan) Vol. 1, No. 2, pp. 197-213.
Journal code: 9005331. ISSN: 1044-2030.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199108
ENTRY DATE: Entered STN: 8 Sep 1991
Last Updated on STN: 3 Mar 2000
Entered Medline: 22 Aug 1991
AB Mouse L cells deficient in expression of the murine cation-independent mannose 6-phosphate receptor/insulin-like growth factor II receptor (CI-MPR/IGF-IIR) were stably transfected with a plasmid containing the cDNA for the human receptor. Transfected cells expressed high levels of the human receptor which functioned in the transport of lysosomal enzymes and was capable of binding 125I-IGF-II, both at the cell surface and intracellularly. Cell surface binding of 125I-IGF-II by the receptor could be inhibited by pretreatment of cells with antibodies to the receptor or by coincubation with the lysosomal enzyme, beta-glucuronidase. Expression of the receptor conferred on transfected cells the ability to internalize and degrade 125I-IGF-II . Cells transfected with the parental vector and those expressing the human CI-MRP/IGF-IIR were found to express an atypical binding site for IGF-II that was distinct from the CI-MPR/IGF-IIR and the type I IGF-receptor. The availability of two cell lines, one of which overexpresses the human CI-MPR/IGF-IIR and one deficient in expression of the murine receptor, may help in the analysis of the role of the receptor in mediating the biological effects of IGF-II. They should also be useful in examining the significance of binding of ligands, such as transforming growth factor-beta 1 precursor and proliferin to this receptor.

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 NEWS  8  MAY 30   IPC 8 Rolled-up Core codes added to CA/CAplus and
                   USPATFULL/USPAT2
 NEWS  9  MAY 30   The F-Term thesaurus is now available in CA/CAplus
 NEWS 10  JUN 02   The first reclassification of IPC codes now complete in
                   INPADOC
 NEWS 11  JUN 26   TULSA/TULSA2 reloaded and enhanced with new search and
                   and display fields
 NEWS 12  JUN 28   Price changes in full-text patent databases EPFULL and PCTFULL
 NEWS 13  JUl 11   CHEMSAFE reloaded and enhanced
 NEWS 14  JUl 14   FSTA enhanced with Japanese patents
 NEWS 15  JUl 19   Coverage of Research Disclosure reinstated in DWPI
 NEWS 16  AUG 09   INSPEC enhanced with 1898-1968 archive
 NEWS 17  AUG 28   ADISCTI Reloaded and Enhanced
 NEWS 18  AUG 30   CA(SM)/CAplus(SM) Austrian patent law changes

 NEWS EXPRESS  JUNE 30 CURRENT WINDOWS VERSION IS V8.01b, CURRENT
               MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
               AND CURRENT DISCOVER FILE IS DATED 26 JUNE 2006.

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=> file medline embase biosis caplus
COST IN U.S. DOLLARS                          SINCE FILE      TOTAL
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                                                        ENTRY     SESSION
FULL ESTIMATED COST                                      0.84        0.84

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=> s (IGF(W)2 OR IGF(W)II or insulin(w)like(w)growth(w)factor(w)II)
L1       25110 (IGF(W) 2 OR IGF(W) II OR INSULIN(W) LIKE(W) GROWTH(W) FACTOR(W)
               II)

=> s l1 and (vaginal or vaginal(w)pessary or intravaginal or pessary)
L2          25 L1 AND (VAGINAL OR VAGINAL(W) PESSARY OR INTRAVAGINAL OR PESSARY
               )

=> dup rem l2
PROCESSING COMPLETED FOR L2
L3          13 DUP REM L2 (12 DUPLICATES REMOVED)

=> dis ibib abs

L3   ANSWER 1 OF 13  CAPLUS  COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER:         2006:383647  CAPLUS
DOCUMENT NUMBER:          144:439970
TITLE:                    Use of fusion proteins that can be taken up by skin
                          cells to deliver therapeutic macromolecules to the
                          bloodstream without injection
INVENTOR(S):              Mrsny, Randall J.
PATENT ASSIGNEE(S):       Trinity Biosystems, Inc., USA
SOURCE:                   PCT Int. Appl., 131 pp.
                          CODEN: PIXXD2
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.           KIND   DATE        APPLICATION NO.          DATE
     ---------------      ----   --------    --------------------     --------
     WO 2006044205         A2    20060427    WO 2005-US35803          20051004
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
             CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
             GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ,
             LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ,
             NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG,
             SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN,
             YU, ZA, ZM, ZW
         RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
             IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ,
             CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH,
             GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
             KG, KZ, MD, RU, TJ, TM
     US 2006153798         A1    20060713    US 2005-244349           20051004
PRIORITY APPLN. INFO.:                     US 2004-615970P      P    20041004
                                           US 2005-684484P      P    20050524
                                           US 2005-718907P      P    20050919
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AB Methods of using peptides that promote cellular uptake and transfer of proteins to deliver macromols. to the bloodstream through the skin without the need for injection are described. The protein of interest is applied as a fusion protein with a receptor binding domain, a transcytosis domain, and a cleavable linker. Generally, the cleavable linker is cleavable by an enzyme present in higher concentration at or near the basal-lateral membrane of a polarized epithelial cell or in the plasma than elsewhere in the body, for example, at the apical side of the polarized epithelial cell. The low rate of delivery of the processed protein can also lessen the risk of developing an immune response to the therapeutic protein (no data.). In other aspects, the invention provides nucleic acids encoding delivery constructs of the invention, kits comprising delivery constructs of the invention, cells expressing delivery constructs of the invention, and methods of using delivery constructs of the invention. Expts. developing the system using green fluorescent protein using cell cultures and rat trachea is demonstrated.

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FILE 'MEDLINE, EMBASE, BIOSIS, CAPLUS' ENTERED AT 10:20:33 ON 30 AUG 2006
L1 25110 S (IGF(W)2 OR IGF(W)II OR INSULIN(W)LIKE(W)GROWTH(W)FACTOR(W)II
L2 25 S L1 AND (VAGINAL OR VAGINAL(W)PESSARY OR INTRAVAGINAL OR PESSA
L3 13 DUP REM L2 (12 DUPLICATES REMOVED)

=> dis ibib abs l3 2-13

L3 ANSWER 2 OF 13 MEDLINE on STN DUPLICATE 1
ACCESSION NUMBER: 2006188132 MEDLINE
DOCUMENT NUMBER: PubMed ID: 16448776
TITLE: Birth insults involving hypoxia produce long-term increases in hippocampal [125I]insulin-like growth factor-I and -II receptor binding in the rat.
AUTHOR: Boksa P; Zhang Y; Amritraj A; Kar S
CORPORATE SOURCE: Department of Psychiatry, McGill University, Douglas Hospital Research Center, 6875 LaSalle Boulevard, Verdun, Quebec, Canada H4H 1R3.
SOURCE: Neuroscience, (2006 May 12) Vol. 139, No. 2, pp. 451-62. Electronic Publication: 2006-01-31. Journal code: 7605074. ISSN: 0306-4522.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200607
ENTRY DATE: Entered STN: 5 Apr 2006
Last Updated on STN: 1 Aug 2006
Entered Medline: 31 Jul 2006

AB Insulin-like growth factors-I and -II and insulin are structurally related mitogenic growth factors with multiple actions in the developing nervous system and adult CNS. Previous studies have demonstrated acute induction of insulin-like growth factors and their receptors, over a time course of several days, in response to hypoxic/ischemic insult to developing or adult brain. The current study tested whether birth insults involving hypoxia may produce long term changes in brain insulin-like growth factor or insulin receptor levels, lasting into adulthood. For this, rats were born vaginally (controls), by cesarean section, or by cesarean section with 15 min of added global anoxia (cesarean section+anoxia), and brain [125I]insulin-like growth factor-I, [125I]insulin-like growth factor-II and [125I]insulin receptor binding sites were assessed autoradiographically at adulthood. [125I]Insulin-like growth factor-I receptor binding sites were increased

in all hippocampal subfields (CA1-CA3, dentate gyrus) in rats born either by cesarean section or by cesarean section+anoxia, compared with vaginal birth. [125I]Insulin-like growth factor-II binding was increased in all hippocampal subfields only in rats born by cesarean section+anoxia compared with either vaginal birth or cesarean section groups. [125I]Insulin-like growth factor-I and [125I]insulin-like growth factor-II binding in frontal cortex, striatum and cerebellum were unaffected by birth group, except for increased [125I]insulin-like growth factor-I binding in the cerebellar molecular layer of cesarean-sectioned animals. Birth group had no significant effect on [125I]insulin binding in any brain region. Affinity cross-linking experiments performed with hippocampal membranes from the three birth groups showed that i) [125I]insulin-like growth factor-I and [125I]insulin-like growth factor-II recognized bands of molecular weights characteristic of insulin-like growth factor-I and insulin-like growth factor-II receptors, respectively, and ii) [125I]insulin-like growth factor-I and [125I] insulin-like growth factor-II were displaced more potently by their respective unlabeled ligands than by related molecules. It is concluded that birth insults involving hypoxia can induce lasting increases in insulin-like growth factor-I and -II receptors in the CNS. There is specificity with respect to the subtype of insulin-like growth factor receptor affected by the particular birth insult and the brain region affected. It is suggested that enduring increases in levels of insulin-like growth factor receptors consequent to hypoxic birth insult may help to maintain hippocampal function at adulthood, and could modulate responsiveness to insulin-like growth factor administration.

L3 ANSWER 3 OF 13 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER:	2005:182819 CAPLUS
DOCUMENT NUMBER:	142:254664
TITLE:	p53 inhibitors and growth promoting agents for enhancing embryo viability
INVENTOR(S):	O'Neill, Christopher
PATENT ASSIGNEE(S):	Northern Sydney Area Health Service, Australia
SOURCE:	PCT Int. Appl., 57 pp. CODEN: PIXXD2
DOCUMENT TYPE:	Patent
LANGUAGE:	English
FAMILY ACC. NUM. COUNT:	1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005019440	A1	20050303	WO 2004-AU1121	20040820
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2004267115	A1	20050303	AU 2004-267115	20040820
CA 2536112	AA	20050303	CA 2004-2536112	20040820
EP 1668116	A1	20060614	EP 2004-761158	20040820
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK				

PRIORITY APPLN. INFO.: AU 2003-904490 A 20030820
WO 2004-AU1121 W 20040820

AB The invention provides a method for enhancing embryo viability comprising administering at least one inhibitor of p53 or a p53-associated pathway to one or more of the following: the embryo, oocytes, sperm, a female animal or a male animal. The invention discloses compns. comprising growth promoting agents combined with p53 inhibitors for promoting embryo viability. Methods for screening compds. capable of promoting embryo viability are included.

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 4 OF 13 MEDLINE on STN DUPLICATE 2
ACCESSION NUMBER: 2003526698 MEDLINE
DOCUMENT NUMBER: PubMed ID: 14605814
TITLE: Expression of transforming growth factor-beta and insulin-like growth factor in molar and placental tissues.
AUTHOR: Pang Zhan-Jun; Xing Fu-Qi
CORPORATE SOURCE: Department of Obstetrics and Gynecology, Nanfang Hospital, Guangzhou 510515, China.. LAB973@fimmu.edu.cn
SOURCE: Archives of gynecology and obstetrics, (2003 Nov) Vol. 269, No. 1, pp. 1-4. Electronic Publication: 2002-09-26. Journal code: 8710213. ISSN: 0932-0067.
PUB. COUNTRY: Germany: Germany, Federal Republic of
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200405
ENTRY DATE: Entered STN: 8 Nov 2003
Last Updated on STN: 26 May 2004
Entered Medline: 25 May 2004

AB The semiquantitative reverse transcription polymerase chain reaction was employed to detect the expression of transforming growth factor beta (TGF-beta) and insulin-like growth factor (IGF) in complete hydatidiform mole, normal first-trimester villi, the normal term placenta (after vaginal/abdominal deliver) and the preeclamptic placenta at term. The expression of IGF-I mRNA was seen in all five tissues, but its level was much lower in the term placental tissues with preeclampsia than in other tissues. The content of IGF-I mRNA in villous tissues from molar pregnancy was slightly higher than in normal first-trimester villi. IGF-II mRNA was detected at similar levels in all three sorts of term placental tissues. However, the expression level of IGF-II mRNA in tissues of complete molar pregnancy was significantly lower than in normal first-trimester villi. TGF-beta(3) was found expressed in all five tissues, while TGF-beta(1) and TGF-beta(2) mRNA were not detected. Compared to the normal first-trimester villi, the expression of TGF-beta(3) in complete hydatidiform molar tissues was comparatively higher. Furthermore, the expression levels of TGF-beta(3) in the preeclamptic placenta and the normal placenta after cesarean birth were higher than in the placenta after vaginal delivery. We concluded that, the change of TGF-beta and IGF expression in placental tissues might be involved in the development of trophoblastic diseases of pregnancy.

L3 ANSWER 5 OF 13 MEDLINE on STN
ACCESSION NUMBER: 2002639790 MEDLINE
DOCUMENT NUMBER: PubMed ID: 12398807
TITLE: Endocrine characteristics of cloned calves.
AUTHOR: Matsuzaki Masatoshi; Shiga Kazuho
CORPORATE SOURCE: Department of Animal and Grassland Research, National Agricultural Research Center for Kyushu Okinawa Region, Kumamoto, Japan.. animal@affrc.go.jp
SOURCE: Cloning and stem cells, (2002) Vol. 4, No. 3, pp. 261-7. Journal code: 101125444. ISSN: 1536-2302.

PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200303
ENTRY DATE: Entered STN: 26 Oct 2002
Last Updated on STN: 1 Apr 2003
Entered Medline: 31 Mar 2003

AB To examine the possible link between endocrine status and perinatal problems related to cattle cloning, plasma concentrations of cortisol, adrenocorticotropic hormone (ACTH) and components of the insulin-like growth factor (IGF) system were compared between 13 somatic cell cloned and seven control Japanese Black calves (five produced by artificial insemination [AI] and two produced from in vitro fertilized embryos [IVP]) immediately after birth. Five cloned calves required delivery by cesarean section (C-section), while all of control calves were delivered by spontaneous vaginal delivery. The C-section delivered clones were heavier at birth, followed by vaginally delivered clones and IVP controls, and AI controls were the lightest. The neonatal mortality (death within the 1st week) of C-section delivered clones was also high (4/5) compared to that of vaginally delivered clones (1/8) or controls (0/7). Plasma concentrations of cortisol and IGF-I were lower in the clones than control calves although the plasma ACTH level was not different between the groups. A striking difference was observed in plasma IGF binding protein (IGFBP) profile in which cloned calves had a greater relative abundance of IGFBP-2 compared with controls. Observed differences suggest that insufficient prepartum rise in plasma cortisol of cloned calves failed to initiate the switch to an adult mode of the IGF system during late gestation and therefore parturition was not spontaneous. Inappropriate developmental changes in endocrine system may be partly responsible for the fetal overgrowth and perinatal complications associated with the cloning technology.

L3 ANSWER 6 OF 13 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2001:185789 CAPLUS
DOCUMENT NUMBER: 134:217212
TITLE: Neurogenic methods and compositions using an Mts1 protein or functional derivative
INVENTOR(S): Bock, Elisabeth; Lukanidin, Eugene M.; Berezin, Vladimir
PATENT ASSIGNEE(S): Prolifia, Inc., USA
SOURCE: PCT Int. Appl., 60 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001018043	A2	20010315	WO 2000-US24495	20000907
WO 2001018043	A3	20010517		
W: AU, CA, CN, JP, MX				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
US 2001011126	A1	20010802	US 1999-393433	19990910
CA 2384658	AA	20010315	CA 2000-2384658	20000907
EP 1272513	A2	20030108	EP 2000-959962	20000907
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY				
JP 2003508545	T2	20030304	JP 2001-522265	20000907
US 2002099010	A1	20020725	US 2001-781509	20010212
US 6903188	B2	20050607		
US 2003100503	A1	20030529	US 2002-269643	20021011

PRIORITY APPLN. INFO.: US 1999-393433 A 19990910
WO 2000-US24495 W 20000907
US 2001-781509 A3 20010212

AB The invention has found that the Mts1 protein is expressed in white matter astrocytes in the spinal cord. Such expression is significantly increased following sciatic nerve injury or dorsal root injury, particularly in astrocytes surrounding dorsal funiculus containing the central processes of the injured primary sensory neurons. The invention has further demonstrated that Mts1 proteins administered extracellularly promote neurite outgrowth from neuronal cells. Based on these findings, the invention provides compns. and methods that are useful for the treatment of various neurol. conditions characterized by death, degeneration or injury of neuronal cells.

L3 ANSWER 7 OF 13 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 2001:274748 BIOSIS
DOCUMENT NUMBER: PREV200100274748
TITLE: Long-term follicular dynamics and biochemical characteristics of dominant follicles in dairy cows subjected to acute heat stress.
AUTHOR(S): Guzeloglu, A.; Ambrose, J. D.; Kassa, T.; Diaz, T.; Thatcher, M. J.; Thatcher, W. W. [Reprint author]
CORPORATE SOURCE: Department of Animal Sciences, University of Florida, Gainesville, FL, 32611-0920, USA
thatcher@animal.ufl.edu
SOURCE: Animal Reproduction Science, (30 April, 2001) Vol. 66, No. 1-2, pp. 15-34. print.
CODEN: ANRSDV. ISSN: 0378-4320.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 6 Jun 2001
Last Updated on STN: 19 Feb 2002

AB The objective of this study was to examine the quality of successive dominant follicles (DFs) after induced heat stress. Non-lactating dairy cows expressing estrus at normal intervals were allocated randomly to heat stress (HS; n = 8) and control (C; n = 8) groups. Cows received GnRH (100 mug, i.m.) on Day 0, a progesterone CIDR-B device on Day 4 and prostaglandin (PGF2alpha; 25 mg, i.m.) on Day 7 upon removal of the CIDR device. The DF and follicles >5 mm were aspirated on Day 8, and GnRH (100 mug) injected following aspiration, to initiate a new follicular wave. In this manner, a DF was aspirated every 8 days (one "follicular cycle") for 10 cycles. After the first follicular cycle, HS cows were placed in environmental chambers for 7 days during the second follicular cycle (8 h per day at 43.3degreeC set point and 16 h per day at 24degreeC for 4 days, and 8 h per day at 43.3degreeC set point and 16 h per day at 32.2degreeC set point for 3 days; relative humidity, 40%) and thereafter maintained outdoors with control cows at a mean ambient temperature (18.5degreeC; range 12.7-26degreeC). Rectal temperature increased ($P < 0.001$) in HS as compared with C cows (39.28 +- 0.01degreeC versus 38.78 +- 0.01degreeC). Concentrations of estradiol (E2; 1662 +- 189 versus 1493 +- 188 ng/ml) and progesterone (P4; 44.7 +- 5 versus 54.1 +- 5.1 ng/ml) in follicular fluid (FF) of DF did not differ between C and HS treatments, respectively. Total FF protein concentration was greater ($P < 0.05$) in HS (99.7 +- 2.3 mg/ml) than in C (92.7 +- 2.3 mg/ml). Heat shock protein 90 (Hsp 90) in FF was not altered by heat stress. IGF-II ligand blots were conducted with FF samples (n = 79) from four HS and four C cows. There was a predominance of IGFBP-3 in 76 of 79 FF samples, indicating healthy follicular status, and only three FF samples had the lower molecular weight IGFBP-2 indicative of a poor quality follicle. Plasma P4 and E2 concentrations did not differ between C and HS groups. The number of class 1 and 3 follicles increased during and just after heat stress, but the number of class 2 follicles did not differ between C and HS cows. Heat stress appeared to induce a decrease in follicular dominance, but GnRH-induced follicular cycles resulted in development of

healthy preovulatory follicles in both groups.

L3 ANSWER 8 OF 13 MEDLINE on STN DUPLICATE 3
ACCESSION NUMBER: 2000325223 MEDLINE
DOCUMENT NUMBER: PubMed ID: 10864794
TITLE: Effect of nutrition and superovulation on oocyte morphology, follicular fluid composition and systemic hormone concentrations in ewes.
AUTHOR: O'Callaghan D; Yaakub H; Hyttel P; Spicer L J; Boland M P
CORPORATE SOURCE: Faculty of Veterinary Medicine, University College Dublin, Ireland.
SOURCE: Journal of reproduction and fertility, (2000 Mar) Vol. 118, No. 2, pp. 303-13.
Journal code: 0376367. ISSN: 0022-4251.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200007
ENTRY DATE: Entered STN: 28 Jul 2000
Last Updated on STN: 28 Jul 2000
Entered Medline: 14 Jul 2000

AB The objective was to determine the effect of dietary intake on follicle and oocyte morphology in unstimulated and superovulated ewes. Fifty-four ewes were fed grass meal at 0.5, 1.0 or 2.0 times maintenance energy requirements (M) for 32 days. Oestrous cycles were synchronized using progestagen pessaries and either unstimulated or superovulated with 200 mg pig FSH. The ewes were killed and ovaries were collected either 36 or 12 h before the anticipated LH surge. Serum progesterone concentrations in ewes on day 10 after withdrawal of the pessary were lower in ewes fed 2.0M than in ewes fed 0.5M or 1.0M ($P < 0.05$). LH pulse frequency tended to be higher in ewes fed 2M than 1M (1.0 +/- 0.3 versus 0.3 +/- 0.2 pulses per 8 h) on day 6 after removal of the pessary but the effect was not significant. In unstimulated ewes, more follicles (>/= 3 mm) were observed when the animals were killed in ewes fed 2.0M (3.5 +/- 0.3) than in ewes fed 0.5M (2.4 +/- 0.3) or 1.0M (2.4 +/- 0.5; $P < 0.05$). Fewer follicles were observed in superovulated ewes on 0.5M (7.5 +/- 1.2) than in ewes on 1.0M (12.0 +/- 0.5) or 2.0M (12.3 +/- 1.4; $P < 0.05$). Follicular fluid progesterone concentrations were higher in ewes fed 0.5M compared with those fed 1M or 2M ($P < 0.05$). Insulin-like growth factor (IGF)-I concentrations were higher in follicular fluid from ewes on 1M compared with either those on 0.5M or 2M ($P < 0.05$), whereas IGF-II concentrations were lower in follicular fluid from ewes on 2M compared with those on 1M or 0.5M ($P < 0.05$). Superovulation increased follicular fluid progesterone, oestradiol, IGF-I and IGF-II concentrations ($P < 0.01$). Concentrations of the 34, 22 and 20 kDa IGF binding proteins were lower in follicles from superovulated ewes compared with unstimulated ewes ($P < 0.05$). Oocytes from superovulated ewes showed abnormalities such as premature activation of cumulus expansion and vacuolation of the nucleolus and increased frequency of detachment of interchromatin-like granules from the nucleolar remnant. Collectively, these results indicate that both high and low dietary intakes can alter systemic and follicular fluid hormone concentrations. Relative to dietary effects, the effects of superovulation were greater and involved substantial increases in follicular fluid hormone concentrations and abnormal oocyte morphology.

L3 ANSWER 9 OF 13 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN DUPLICATE 4
ACCESSION NUMBER: 2000:277538 BIOSIS
DOCUMENT NUMBER: PREV200000277538
TITLE: Method for detecting free IGFBP-1.
AUTHOR(S): Fuks, Boris [Inventor, Reprint author]; Boltovskaya, Marin [Inventor]; Konstantinov, Alexander [Inventor]; Nazimova,

Svetlan [Inventor]; Starosvetskaya, Nelli [Inventor]; Stepanov, Alexander [Inventor]; Zaraisky, Evgeny [Inventor]
CORPORATE SOURCE: Moscow, Russia
ASSIGNEE: California Research LLC, Mountain View, CA, USA
PATENT INFORMATION: US 5968758 19991019
SOURCE: Official Gazette of the United States Patent and Trademark Office Patents, (Oct. 19, 1999) Vol. 1227, No. 3. e-file. CODEN: OGUPE7. ISSN: 0098-1133.
DOCUMENT TYPE: Patent
LANGUAGE: English
ENTRY DATE: Entered STN: 6 Jul 2000
Last Updated on STN: 7 Jan 2002

AB Antibodies having binding affinity for free IGFBP-1, biological compositions including antibodies having binding affinity for free IGFBP-1, kits for detecting free IGFBP-1 using the antibodies, and cell lines for producing the antibodies are provided. Also provided are devices and methods for detecting free IGFBP-1 and a rupture in a fetal membrane based on the presence of amniotic fluid in a vaginal secretion, as indicated by the presence of free IGFBP-1 in the vaginal secretion. The antibodies that are provided may be characterized by their ability to selectively recognize those IGFBP-1 molecules which are free of IGF-1 and IGF-2, i.e., antibodies which have a binding affinity for free IGFBP-1 that is greater than a binding affinity of the antibody to bound IGFBP-1. These antibodies may also be characterized by their competition with IGF-1 and IGF-2 for binding to IGFBP-1.

L3 ANSWER 10 OF 13 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN DUPLICATE 5
ACCESSION NUMBER: 1999:305507 BIOSIS
DOCUMENT NUMBER: PREV199900305507
TITLE: Antibodies to free IGFBP-1.
AUTHOR(S): Boltovskaya, Marina [Inventor]; Fuks, Boris [Inventor, Reprint author]; Konstantinov, Alexander [Inventor]; Nazimova, Svetlana [Inventor]; Starosvetskaya, Nelli [Inventor]; Stepanov, Alexander [Inventor]; Zaraisky, Evgeny [Inventor]
CORPORATE SOURCE: IntraBiotics Pharmaceuticals, Inc., Mountain View, CA, USA
ASSIGNEE: California Research LLC
PATENT INFORMATION: US 5891722 19990615
SOURCE: Official Gazette of the United States Patent and Trademark Office Patents, (15-JUN-99) Vol. 1221, No. 1. print. CODEN: OGUPE7. ISSN: 0098-1133.
DOCUMENT TYPE: Patent
LANGUAGE: English
ENTRY DATE: Entered STN: 12 Aug 1999
Last Updated on STN: 12 Aug 1999

AB Antibodies having binding affinity for free IGFBP-1, biological compositions including antibodies having binding affinity for free IGFBP-1, kits for detecting free IGFBP-1 using the antibodies, and cell lines for producing the antibodies are provided. Also provided are devices and methods for detecting free IGFBP-1 and a rupture in a fetal membrane based on the presence of amniotic fluid in a vaginal secretion, as indicated by the presence of free IGFBP-1 in the vaginal secretion. The antibodies that are provided may be characterized by their ability to selectively recognize those IGFBP-1 molecules which are free of IGF-1 and IGF-2, i.e., antibodies which have a binding affinity for free IGFBP-1 that is greater than a binding affinity of the antibody to bound IGFBP-1. These antibodies may also be characterized by their competition with IGF-1 and IGF-2 for binding to IGFBP-1.

L3 ANSWER 11 OF 13 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1999:282116 CAPLUS

DOCUMENT NUMBER: 130:321233
TITLE: Human urinary incontinence and methods of treatment using IGF-I or IGF-II,
INVENTOR(S): Spencer, E. Martin; Lue, Tom
PATENT ASSIGNEE(S): USA
SOURCE: PCT Int. Appl., 23 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9920299	A1	19990429	WO 1998-US21919	19981016
W: GD				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				

PRIORITY APPLN. INFO.: US 1997-954340 A 19971017

AB A method is provided for treating human urinary incontinence using therapeutic amts. of human insulin-like growth factor-I (IGF-I) administered systemically, intraurethrally, or periurethrally. Alteration of the muscles, nerves and fascia of the bladder, urethra and pelvic floor are the most important factors in the development of urinary incontinence. These alterations may occur in women subsequent to vaginal delivery and may be caused in both sexes by trauma and degeneration. IGF-I significantly decreases the incidence of urinary incontinence in exptl. models by its favorable actions on muscle tissues, nervous tissues, and pelvic fascia, in combination or individually. Administering a complex of an IGF with one of the IGF binding proteins may provide a better response than IGF-I alone. Growth hormone may also be effective by virtue of its stimulatory actions on IGF-I and IGF binding protein-3, and possibly by an independent action on tissue repair.

REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 12 OF 13 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1999:147322 CAPLUS
DOCUMENT NUMBER: 130:163592
TITLE: Device for detecting free IGFBP-1
INVENTOR(S): Fuks, Boris; Boltovskaya, Marina; Konstantinov, Alexander; Nazimova, Svetlana; Starosvetskaya, Nelli; Stepanov, Alexander; Zaraisky, Evgeny
PATENT ASSIGNEE(S): California Research LLC, USA
SOURCE: U.S., 27 pp., Cont.-in-part of U.S. Ser. No. 234,851.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 4
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5877029	A	19990302	US 1996-738248	19961028
US 5597700	A	19970128	US 1994-234851	19940428
CA 2189050	AA	19951109	CA 1995-2189050	19950427
AT 186403	E	19991115	AT 1995-918108	19950427

PRIORITY APPLN. INFO.: US 1994-234851 A2 19940428

AB Antibodies having binding affinity for free IGFBP-1, biol. compns. including antibodies having binding affinity for free IGFBP-1, kits for detecting free IGFBP-1 using the antibodies, and cell lines for producing the antibodies are provided. Also provided are devices and methods for detecting free IGFBP-1 and a rupture in a fetal membrane based on the presence of amniotic fluid in a vaginal secretion, as indicated

by the presence of free IGFBP-1 in the vaginal secretion. The antibodies that are provided may be characterized by their ability to selectively recognize those IGFBP-1 mols. which are free of IGF-1 and IGF-2, i.e., antibodies which have a binding affinity for free IGFBP-1 that is greater than a binding affinity of the antibody to bound IGFBP-1. These antibodies may also be characterized by their competition with IGF-1 and IGF-2 for binding to IGFBP-1.

REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 13 OF 13 EMBASE DUPLICATE 6

ACCESSION NUMBER: 95133585 EMBASE
DOCUMENT NUMBER: 1995133585
TITLE: Coordinate regulation by diethylstilbestrol of the platelet-derived growth factor-A (PDGF-A) -B chains and the PDGF receptor α- and β-subunits in the mouse uterus and vagina: Potential mediators of estrogen action.
AUTHOR: Gray K.; Eitzman B.; Raszmann K.; Steed T.; Geboff A.; McLachlan J.; Bidwell M.
CORPORATE SOURCE: F. Edward Hebert School of Medicine, USUHS, 4301 Jones Bridge Road,Bethesda, MD 20814-4799, United States
SOURCE: Endocrinology, (1995) Vol. 136, No. 5, pp. 2325-2340. . ISSN: 0013-7227 CODEN: ENDOAO
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 003 Endocrinology
029 Clinical Biochemistry
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 23 May 1995
Last Updated on STN: 23 May 1995

AB The effects of estrogen on the reproductive tract involve cell proliferation, migration, and differentiation, which need to be well coordinated. Polypeptide growth factors are believed to play a vital role in a number of these cellular processes. Among the growth factors now documented to be associated with estrogen action are epidermal growth factor, transforming growth factor-α (TGFα), transforming growth factor-β1 (TGFβ1), TGFβ2, TGFβ3, and insulin-like growth factor-I (IGF-I). Platelet- derived growth factors (PDGFs) are also potent mitogens, which consist of two peptide chains, denoted A and B, that dimerize to isoforms (PDGF-AA, -AB, and -BB) which differ in their functional properties, secretory behavior, receptor binding, and physiological effects. To study the role of the PDGF-A and -B chains and the PDGF receptor subunits, α and β, during estrogen action in the mouse reproductive tract, time-dependent changes in the expression of these genes were examined by Northern and in situ RNA analyses and by immunohistochemistry after a single treatment of immature CD-1 (17- to 19-day-old) mice with the synthetic estrogen, diethylstilbestrol (DES). Our results demonstrate estrogen modulation of the expression of messenger RNA (mRNA) and protein for the PDGF ligands and receptors in both the uterus and vagina of the mouse. Northern and in situ RNA analyses demonstrate time- dependent estrogen induction of the mRNA levels for these genes in both tissues within 3 h after treatment. However, distinctive mRNA expression profiles for the PDGF ligand and receptor genes are exhibited by the uterus and vagina in response to DES, especially in that the induction of transcripts for PDGF-A and both receptor subunits is more transient in the vagina than in the uterus. Steroid specificity studies demonstrate predominant estrogen-specific regulation of mRNA induction for these genes. Analysis of cell-specific RNA expression by in situ hybridization reveals prominent induction of transcripts for the PDGF chains and receptor subunits in the uterine and vaginal epithelium after estrogen treatment, although enhanced

expression of mRNA is also noted in the stroma, particularly for the PDGF receptor subunit genes. Cellular localization of the PDGF ligand and receptor protein molecules by immunohistochemistry detected significant immunostaining for all of these proteins in both the uterus and vagina of control animals. After DES treatment, the uterus exhibits a significant decrease in the level of PDGF ligand and receptor proteins immunostained within 6 h, whereas less dramatic effects are observed in the vagina. Affinity labeling of PDGF α-receptor with [125I]PDGF-AA establishes the presence of functional PDGF α-receptor in the uterus and vagina. Estrogen treatment is found to reduce the amount of PDGF α-receptor that can be covalently labeled in both tissues, especially in the uterus. This reduction in affinity labeling of the PDGF receptor is in agreement with the finding of decreased immunostaining for the PDGF receptors in these tissues and supports estrogen modulation of PDGF receptors in the reproductive tract. The induction of the PDGF ligand and receptor genes by estrogen is a relatively early event, occurring many hours before the initiation of DNA synthesis in the uterine and vaginal epithelium, which implicates the PDGF signal transduction pathway in estrogen-mediated growth. Based on the coexpression of the potent PDGF mitogens and their receptors in the mouse reproductive tract, our findings demonstrate the presence in vivo of another powerful autocrine or paracrine loop that is regulated by estrogen, which probably plays an important role in estrogen action by coordinating growth and differentiation. Collectively, these data and other in vivo studies have now shown that estrogen regulates multiple peptide growth factors in the reproductive tract, which suggest that estrogen stimulation of DNA synthesis may be controlled by potent competence (PDGF and PDGF receptors) and progression (TGFα, epidermal growth factor, IGF-I, IGF -II, and their receptors) factors interacting by autocrine/paracrine mechanisms to insure a synchronized integrated tissue growth response.

L4 ANSWER 12 OF 42 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN

ACCESSION NUMBER: 2002:445749 BIOSIS
DOCUMENT NUMBER: PREV200200445749
TITLE: Endometrial cell specific gene activation during implantation and early pregnancy.
AUTHOR(S): Tseng, Linda [Reprint author]; Mazella, James
CORPORATE SOURCE: Department of Obstetrics, Gynecology and Reproductive Medicine, State University of New York at Stony Brook, Stony Brook, NY, 11794, USA
litseng@notes.cc.sunysb.edu
SOURCE: Frontiers in Bioscience, (June 1, 2002) Vol. 7, No. Cited June 18, 2002, pp. d1566-d1574. http://www.bioscience.org/. online.
ISSN: 1093-4715.
DOCUMENT TYPE: Article
General Review; (Literature Review)
LANGUAGE: English
ENTRY DATE: Entered STN: 21 Aug 2002
Last Updated on STN: 21 Aug 2002

AB Human endometrium expresses numerous genes to achieve an optimal uterine environment for implantation and maintaining the pregnancy. In this review, we will summarize our previous observations on progestin regulated gene expression, estrogen metabolic enzymes, nitric oxide synthase, aromatase, IGF-I and II, IGFBP-1, prolactin and glycodelin. These genes are differentially activated in two types of endometrial cells during the menstrual cycle and early pregnancy. Multiple gene activation driven by progestin appears to be the major event responsible for the differentiation of endometrial cells. They play critical roles of endometrial cell function during implantation and pregnancy.

L4 ANSWER 13 OF 42 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN DUPLICATE 3

ACCESSION NUMBER: 2002146852 EMBASE
TITLE: Follicular fluid markers of oocyte developmental potential.
AUTHOR: Mendoza C.; Ruiz-Requena E.; Ortega E.; Cremades N.; Martinez F.; Bernabeu R.; Greco E.; Tesarik J.
CORPORATE SOURCE: J. Tesarik, Laboratoire d'Eylau, 55 Rue Saint-Didier, 75116 Paris, France. cmendoza@ugr.es
SOURCE: Human Reproduction, (2002) Vol. 17, No. 4, pp. 1017-1022. .
Refs: 24
ISSN: 0268-1161 CODEN: HUREEE
COUNTRY: United Kingdom
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 010 Obstetrics and Gynecology
028 Urology and Nephrology
029 Clinical Biochemistry
003 Endocrinology
037 Drug Literature Index
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 2 May 2002
Last Updated on STN: 2 May 2002

AB Background: Concentrations of certain substances in follicular fluid (FF) are related to fertilization outcome and early post-fertilization development. The study aim was to identify FF markers with which to predict embryo implantation potential. Methods: Concentrations of selected hormones, cytokines and growth factors in individual FF samples obtained during assisted reproduction treatment were related with treatment outcomes. Results: Mean concentrations of LH, growth hormone (GH), prolactin (PRL), 17β-estradiol (E2) and insulin-like growth factor (IGF)-I were higher, and that of interleukin-1 (IL-1) was lower, in treatment attempts leading to a clinical pregnancy as compared with those

in which no pregnancy was established. Concentrations of FSH, progesterone, tumour necrosis factor-α and IGF-II were similar in successful and unsuccessful attempts. In successful attempts, LH and GH levels were higher in those follicles from which oocytes giving rise to transferred embryos (i.e. embryos with best morphology and fastest cleavage rate) originated, as compared with other follicles from which a mature oocyte was recovered but was cryopreserved for later use. Conclusions: FF levels of LH, GH, PRL, E2, IGF-I and IL-1 may serve to analyse cases of repeated assisted reproduction failures and to assess effects of modifications of the ovarian stimulation protocol.

L4 ANSWER 14 OF 42 MEDLINE on STN DUPLICATE 4
ACCESSION NUMBER: 2002425383 MEDLINE
DOCUMENT NUMBER: PubMed ID: 12163330
TITLE: Plasma concentrations of insulin-like growth factors among healthy adult men and postmenopausal women: associations with body composition, lifestyle, and reproductive factors.
AUTHOR: Chang Shine; Wu Xifeng; Yu He; Spitz Margaret R
CORPORATE SOURCE: Department of Epidemiology, The University of Texas M. D. Anderson Cancer Center, Houston, Texas 77030-4009, USA.. ChangSh@mail.nih.gov
SOURCE: Cancer epidemiology, biomarkers & prevention : a publication of the American Association for Cancer Research, cosponsored by the American Society of Preventive Oncology, (2002 Aug) Vol. 11, No. 8, pp. 758-66. Journal code: 9200608. ISSN: 1055-9965.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200209
ENTRY DATE: Entered STN: 17 Aug 2002
Last Updated on STN: 11 Sep 2002
Entered Medline: 10 Sep 2002

AB As evidence builds for cancer risk associated with insulin-like growth factors (IGFs) and their binding proteins (BPs), capitalizing on such associations for cancer prevention requires identifying the determinants of IGF levels. We measured plasma IGF-I, IGF-II, and IGF BP-3 in a cross-section of 210 men and 171 postmenopausal women enrolled in research as healthy controls. Using linear regression adjusted for age and ethnicity, we evaluated associations between IGF and IGF BP levels and gender, height, body mass index (BMI), smoking, caloric intake, physical activity, and reproductive factors. As expected, women using hormone replacement therapy (HRT) recently had significantly lower IGF-I levels than nonusers. Overall, IGF-I and IGF BP-3 levels did not differ by gender, although men had significantly higher molar ratios of IGF-I to IGF BP-3 and lower plasma IGF-II than women without recent HRT use. For men, BMI was a better predictor of IGF-I levels than height, whereas for women, height was more important. Lower IGF-II levels for both genders were associated with higher BMI and lower physical activity. Lower physical activity was associated with lower IGF BP-3 levels among men. Miscarriage number and menopausal age were positively associated with IGF BP-3 levels. HRT use strongly depressed IGF-I levels among smokers, and additional analysis revealed no remarkable associations. Caloric intake was negatively associated with IGF-I levels among men. Results for ratios of IGF-I and IGF-II to IGF BP-3 generally reflected those for IGF-I and IGF-II levels, respectively. In conclusion, whereas some traditional cancer risk factors were associated with IGF levels, altogether, they accounted for <15% of the total variability in plasma levels for each IGF, suggesting that other factors influence IGF levels.

L4 ANSWER 15 OF 42 MEDLINE on STN

ACCESSION NUMBER: 2003081800 MEDLINE
DOCUMENT NUMBER: PubMed ID: 12592678
TITLE: Effect of yangjing zhongyu decoction on expression of insulin-like growth factor II and its receptor in endometrium of women with unexplained infertility
.
AUTHOR: Wu Rui-jin; Zhou Fu-zhen
CORPORATE SOURCE: Women's Hospital, Medical School of Zhejiang University, Hangzhou 310006.
SOURCE: Zhongguo Zhong xi yi jie he za zhi Zhongguo Zhongxiyi jiehe zazhi = Chinese journal of integrated traditional and Western medicine / Zhongguo Zhong xi yi jie he xue hui, Zhongguo Zhong yi yan jiu yuan zhu ban, (2002 Jul) Vol. 22, No. 7, pp. 490-3.
Journal code: 9211576. ISSN: 1003-5370.
PUB. COUNTRY: China
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: Chinese
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200306
ENTRY DATE: Entered STN: 21 Feb 2003
Last Updated on STN: 21 Jun 2003
Entered Medline: 20 Jun 2003

AB OBJECTIVE: To investigate the effect of Yangjing Zhongyu Decoction (YJZYD) on expression of insulin-like growth factor II (IGF-II) and its receptor II (IGF-II R) in endometrium of women with unexplained infertility, and the relationship of which with the receptibility of endometrium to ovum implantation . METHODS: Reverse transcription-polymerase chain reaction (RT-PCR) assay was used to detect quantitatively the expression of IGF-II and IGF-II R in 22 women with unexplained infertility before and after YJZYD treatment during mid-luteal phase. RESULTS: The levels of IGF-II and IGF -II R before treatment were 0.794 +/- 0.453 and 0.725 +/- 0.354 (in grey level, the same below) respectively, which were significantly increased in the same phase after treatment, reaching 1.202 +/- 0.551 and 1.045 +/- 0.581 respectively ($P < 0.01$ and $P < 0.05$). Correlation analysis showed the level of IGF-II mRNA was positively correlated with the level of IGF-II mRNA either before or after treatment. CONCLUSION: YJZYD could enhance the expression of IGF-II and IGF-II R in the endometrium during mid-luteal phase, promote the differentiation of endometrium and increase its reception to ovum implantation.

L4 ANSWER 16 OF 42 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 2002:327740 BIOSIS
DOCUMENT NUMBER: PREV200200327740
TITLE: The regional expression of insulin-like growth factor II (IGF-II) and insulin-like growth factor binding protein-1 (IGFBP-1) in the placentae of women with pre-eclampsia.
AUTHOR(S): Gratton, R. J. [Reprint author]; Asano, H.; Han, V. K. M.
CORPORATE SOURCE: Department of Obstetrics and Gynecology, The Lawson Health Research Institute, St Joseph's Health Centre, 268 Grosvenor Street, London, Ontario, N6A 4V2, Canada
rgratton@uwo.ca
SOURCE: Placenta, (April, 2002) Vol. 23, No. 4, pp. 303-310. print.
CODEN: PLACDF. ISSN: 0143-4004.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 5 Jun 2002
Last Updated on STN: 5 Jun 2002

AB Insulin-like growth factors and their binding proteins regulate cellular

proliferation, differentiation and function, and play an important role in placental development. IGF-II and IGFBP-1 are abundantly expressed by cells at the maternal-fetal interface and mediate cell-to-cell communication between trophoblasts and decidua. Placentae of pre-eclamptic pregnancies show villous cytotrophoblast proliferation, increased syncytial sprout formation and impaired trophoblast invasion. We hypothesized that the expression of IGF-II and IGFBP-1 by cells at the maternal-fetal interface is altered in pre-eclampsia. We determined the regional abundance and cellular localization of IGF-II mRNA and IGFBP-1 mRNA and protein in placentae from normotensive control and pre-eclamptic pregnancies. IGF-II mRNA was expressed in both the chorionic villi and basal plate decidua regions. Increased IGF-II mRNA abundance was observed in the intermediate trophoblasts of peri-infarct regions. IGFBP-1 expression was present only in the decidua of the basal plate and membranes, and this expression was decreased significantly in pre-eclamptic placentae. The increased IGF-II expression in the intermediate trophoblast surrounding placental infarcts suggests a role for IGF-II in placental repair or remodelling. Decreased IGFBP-1 mRNA expression in the basal plate decidua suggests that the increased concentrations of IGFBP-1 the circulation of pre-eclamptic women is not of decidual origin. The altered IGF-II and IGFBP-1 expression at the fetomaternal interface may be important in the pathophysiology of pre-eclampsia.

L4 ANSWER 17 OF 42 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN

ACCESSION NUMBER: 2001:221324 BIOSIS
DOCUMENT NUMBER: PREV200100221324
TITLE: Markers of type I and type III collagen turnover, insulin-like growth factors, and their binding proteins in cord plasma of small premature infants: Relationships with fetal growth, gestational age, preeclampsia, and antenatal glucocorticoid treatment.
AUTHOR(S): Kajantie, Eero [Reprint author]; Hytinantti, Timo; Koistinen, Riitta; Risteli, Juha; Rutanen, Eeva-Marja; Seppala, Markku; Andersson, Sture
CORPORATE SOURCE: The Hospital for Children and Adolescents, Helsinki University Central Hospital, FI-00029 HYKS, Helsinki, Finland
eero.kajantie@hus.fi
SOURCE: Pediatric Research, (April, 2001) Vol. 49, No. 4, pp. 481-489. print.
CODEN: PEREBL. ISSN: 0031-3998.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 9 May 2001
Last Updated on STN: 18 Feb 2002

AB Disorders affecting fetal growth are commonly associated with premature birth. IGFs and their binding proteins (IGFBPs) are potent regulators of fetal growth. In vitro evidence suggests that they regulate collagen turnover. Collagen turnover can be monitored by serum markers of type I collagen synthesis (PINP) and degradation (ICTP) and a marker of type III collagen synthesis (PIIINP). We examined whether these markers in fetal circulation reflect intrauterine growth and maturity, and whether any interrelationship exists between them and fetal IGFs and IGFBPs in preterm infants before 32 wk of gestation. Cord plasma PINP, ICTP, PIIINP, IGF-I, IGF-II, IGFBP-1, and IGFBP-3 were determined for 98 preterm infants. To express birth weight in units adjusted for gestational age, a birth weight SD score (SDS) was calculated. Negative correlations existed between gestational age and PINP ($r = -0.43$; $p < 0.0001$), ICTP ($r = -0.34$; $p = 0.002$), and PIIINP ($r = -0.34$; $p = 0.0001$). Positive correlations existed between birth weight SDS and PINP ($r = 0.40$;

p = 0.0002) and ICTP (r = 0.48; p < 0.0001) but not PIIINP. Moreover, birth weight SDS was positively correlated with IGF-I (r = 0.58; p < 0.0001) and IGFBP-3 (r = 0.44; p < 0.0001) and negatively correlated with IGF-II (r = -0.36; p = 0.003) and IGFBP-1 (r = -0.50; p < 0.0001). Gestational age correlated with IGFBP-3 (r = 0.25; p = 0.03). In preeclampsia, IGF-I was lower (p = 0.002) and IGFBP-1 higher (p < 0.0001), also after adjustment for fetal size. The number of antenatal glucocorticoid treatments was associated with lower ICTP (p = 0.04), higher IGF-I (p = 0.002), lower IGF-II (p = 0.02), lower IGFBP-1 (p = 0.05), and higher IGFBP-3 (p = 0.004), also after adjustment for potential confounders. In multiple regression analysis, the factors significantly associated with PINP (R2 = 0.47) were gestational age and IGF-I, and those associated with ICTP (R2 = 0.54) were IGF-I, gestational age, and antenatal glucocorticoid treatment. We conclude that IGF-I may be involved in regulation of type I collagen turnover in the growing fetus. Cord blood PINP and ICTP reflect both fetal growth and maturity and deserve evaluation as potential indicators of postnatal growth velocity in preterm infants, whereas PIIINP reflects fetal maturity.

L4 ANSWER 18 OF 42 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN

ACCESSION NUMBER: 2002:165692 BIOSIS
DOCUMENT NUMBER: PREV200200165692
TITLE: IGF-II and its receptors are present in human granulosa-luteal cells, and IGF-II acts as co-gonadotrophin on steroidogenesis.
AUTHOR(S): Seelig, A. S. [Reprint author]; Schwartz, P. T. [Reprint author]; Banz, C. [Reprint author]; Jablonski, B. [Reprint author]; Diedrich, K. [Reprint author]; Ortmann, O. [Reprint author]
CORPORATE SOURCE: Department of Gynecology and Obstetrics, Medical University Luebeck, Luebeck, Germany
SOURCE: Human Reproduction (Oxford), (2001) Vol. 16, No. Abstract Book 1, pp. 65. print.
Meeting Info.: 17th Annual Meeting of the European Society of Human Reproduction and Embryology. Lausanne, Switzerland. July 01-04, 2001. European Society of Human Reproduction and Embryology; European Society of Human Reproduction and Embryology.
CODEN: HUREEE. ISSN: 0268-1161.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LANGUAGE: English
ENTRY DATE: Entered STN: 5 Mar 2002
Last Updated on STN: 5 Mar 2002

L4 ANSWER 19 OF 42 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN DUPLICATE 5

ACCESSION NUMBER: 2000151153 EMBASE
TITLE: Insulin-like growth factors (IGFs), IGF-binding proteins (IGFBPs), and IGFBP-3 protease activity in the peritoneal fluid of patients with and without endometriosis.
AUTHOR: Kim J.G.; Chang Seok Suh; Seok Hyun Kim; Young Min Choi; Shin Yong Moon; Jin Yong Lee
CORPORATE SOURCE: Dr. J.G. Kim, Department of Obstetrics/Gynecology, Seoul National University Hospital, 28 Yeungun-Dong, Chongno-Ku, Seoul 110-744, Korea, Republic of. kimjg@plaza.snu.ac.kr
SOURCE: Fertility and Sterility, (2000) Vol. 73, No. 5, pp. 996-1000. .
Refs: 21
ISSN: 0015-0282 CODEN: FESTAS
PUBLISHER IDENT.: S 0015-0282(00)00493-3
COUNTRY: United States

DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 005 General Pathology and Pathological Anatomy
010 Obstetrics and Gynecology
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 25 May 2000
Last Updated on STN: 25 May 2000

AB Objective: To compare levels of insulin-like growth factor (IGF) components in the peritoneal fluid of patients with and without endometriosis. Design: Patients with endometriosis were compared with control patients. Setting: Seoul National University Hospital, Korea. Patient(s): Forty-three patients with endometriosis and 20 patients without endometriosis. Intervention(s): Peritoneal fluid specimens were collected. Main Outcome Measure(s): Insulin-like growth factors, IGF binding protein (IGFBP) profiles and IGFBP-3 protease activity. Result(s): The IGF-I levels in peritoneal fluid were significantly higher in patients with endometriosis than in control patients, while the IGFBP-3 levels and the relative proportion of IGFBP-2 in peritoneal fluid were significantly lower in patients with endometriosis than in control patients. However, IGF-II levels, IGFBP-4 profiles, and IGFBP-3 protease activity did not differ significantly between the two groups. No correlation between these IGF components in peritoneal fluid and the stage of endometriosis was noted. Conclusion(s): The profiles of IGF components in peritoneal fluid of patients with pelvic endometriosis may play an important role in the growth of ectopic endometrium and endometriosis-induced infertility. (C)2000 by American Society for Reproductive Medicine.

L4 ANSWER 20 OF 42 MEDLINE on STN DUPLICATE 6
ACCESSION NUMBER: 2001106732 MEDLINE
DOCUMENT NUMBER: PubMed ID: 11190375
TITLE: Changes in mRNA expression of insulin-like growth factors and insulin-like growth factor-binding proteins in ovarian granulosa cells after cotreatment with growth hormone in low responders.
AUTHOR: Wang H S; Wang T H; Soong Y K
CORPORATE SOURCE: Department of Obstetrics & Gynecology, Chang Gung Memorial Hospital, 5 Fu-Shin Street, Kweishan, Taoyuan, Taiwan, R.O.C.. hswang86@ms17.hinet.net
SOURCE: Chang Gung medical journal, (2000 Nov) Vol. 23, No. 11, pp. 662-71.
Journal code: 101088034.
PUB. COUNTRY: China (Republic: 1949-)
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200102
ENTRY DATE: Entered STN: 22 Mar 2001
Last Updated on STN: 22 Mar 2001
Entered Medline: 8 Feb 2001

AB BACKGROUND: Insulin-like growth factors (IGFs) in the intraovarian autocrine control mechanism may serve as a central signal, and the granulosa cell is their site of production, reception, and action. In addition, various IGF-binding proteins (IGFBPs) are thought to modulate and regulate the actions of IGFs and in turn influence the growth and maturation of ovarian follicles. METHODS: To further investigate the follicular growth and maturation regulated by IGFs and IGFBPs in the ovary of low responders, 14 cases of low responders cotreated with growth hormone (GH) were studied. Another 14 normal responders without GH treatment were also recruited as controls. RESULTS: Serum levels of estradiol on day 6 and day 9 of the cycle and on the day of HCG administration, and the numbers of oocytes retrieved and follicles on the day of oocyte retrieval were significantly lower in low responders before growth hormone (GH) treatment than those in low responders after GH

treatment as well as those in normal responders. Expression of both IGF-II and IGFBP-1 mRNA was elevated (by 23% and 35%, respectively) in granulosa cells from low responders after GH treatment as compared to that in low responders before GH treatment. In contrast, there was a substantial decrease (16%) in expression of IGFBP-3 mRNA in granulosa cells from low responders after GH treatment. Clinically, the pregnancy rate was lower in low responders after GH treatment as compared to controls (7% vs. 29%). CONCLUSION: Cotreatment with growth hormone in low responders might not increase the pregnancy rate.

L4 ANSWER 21 OF 42 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN

ACCESSION NUMBER: 2000:141225 BIOSIS
DOCUMENT NUMBER: PREV200000141225
TITLE: Genetic analysis of insulin-like growth factor II and HLA-G in pre-eclampsia.
AUTHOR(S): Bermingham, J.; Jenkins, D.; McCarthy, T. [Reprint author]; O'Brien, M.
CORPORATE SOURCE: Department of Biochemistry, University College Cork, Cork, Ireland
SOURCE: Biochemical Society Transactions, (Feb., 2000) Vol. 28, No. 2, pp. 215-219. print.
Meeting Info.: The 670th Meeting of the Biochemical Society. Cork, Ireland. September 07-09, 1999. Biochemical Society.
CODEN: BCSTB5. ISSN: 0300-5127.
DOCUMENT TYPE: Conference; (Meeting)
Conference; (Meeting Paper)
LANGUAGE: English
ENTRY DATE: Entered STN: 19 Apr 2000
Last Updated on STN: 4 Jan 2002

L4 ANSWER 22 OF 42 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN

ACCESSION NUMBER: 2000:442650 BIOSIS
DOCUMENT NUMBER: PREV200000442650
TITLE: Seminal plasma insulin-like growth factors (IGFS) and IGF-binding proteins in infertile men with low sperm counts and low sperm motility.
AUTHOR(S): Lee, K.-O. [Reprint author]; Fu, L.; Miao, Z.-R.; Bongso, A.-T.
CORPORATE SOURCE: Lower Kent Ridge Road, Singapore, Singapore
SOURCE: Growth Hormone and IGF Research, (June, 2000) Vol. 10, No. 3, pp. 164-165. print.
Meeting Info.: 2000 Meeting of the Growth Hormone Research Society: Basic and Clinical GH and IGF-I Research in the Postgenomic Era. Goteborg, Sweden. September 07-09, 2000.
ISSN: 1096-6374.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LANGUAGE: English
ENTRY DATE: Entered STN: 18 Oct 2000
Last Updated on STN: 10 Jan 2002

L4 ANSWER 23 OF 42 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN

ACCESSION NUMBER: 2000:117219 BIOSIS
DOCUMENT NUMBER: PREV200000117219
TITLE: Role of the IGF system in trophoblast invasion and pre-eclampsia.
AUTHOR(S): Irwin, J. C. [Reprint author]; Suen, L.-F.; Martina, N. A.; Mark, S. P.; Giudice, L. C.
CORPORATE SOURCE: Division of Reproductive Endocrinology and Infertility, Department of Gynecology and Obstetrics, Stanford

'decreased' ovarian reserve group compared with the 'normal' ovarian reserve group, with no change in estradiol or IGF-II levels. This resulted in a decreased molar IGF-I: BP ratio and an increased molar IGF-II:IGFBP-1 ratio. In unstimulated cycles, mean follicular fluid concentrations of IGFs did not differ significantly compared with those in stimulated cycles, whereas concentrations of IGFBP-1 and IGFBP-3 were significantly lower, leading to higher molar ratios of the IGFs to the binding proteins. Conclusions: Follicular fluid IGF and binding proteins vary as a function of ovarian reserve and gonadotropin stimulation. This may reflect either differences in oocyte quality or a suboptimal follicular fluid environment.

L4 ANSWER 25 OF 42 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN

ACCESSION NUMBER: 1999065484 EMBASE
TITLE: Insulin like growth factors in endometrial function.
AUTHOR: Rutanen E.-M.
CORPORATE SOURCE: Dr. E.-M. Rutanen, Department Obstetrics and Gynecology, Helsinki University Central Hospital, Helsinki, Finland
SOURCE: Gynecological Endocrinology, (1998) Vol. 12, No. 6, pp. 399-406. .
Refs: 45
ISSN: 0951-3590 CODEN: GYENER
COUNTRY: United Kingdom
DOCUMENT TYPE: Journal; General Review
FILE SEGMENT: 003 Endocrinology
010 Obstetrics and Gynecology
029 Clinical Biochemistry
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 4 Mar 1999
Last Updated on STN: 4 Mar 1999

AB Growth factors and related peptides are believed to medicate and modulate the actions of hormones at their target tissues through autocrine/paracrine mechanisms. Endometrial stromal cells produce insulin-like growth factors I and II (IGF-I and IGF-II) as well as the high-affinity IGF binding proteins (IGFBPs), whereas epithelial cells and, in a lesser amount, also stromal cells contain cell membrane receptors for IGFs. IGFs have proliferative, differentiative and metabolic effects. Estrogen stimulates IGF-I gene expression in the endometrium, and IGF-I is assumed to mediate estrogen action. IGF -II gene expression is associated with endometrial differentiation. All six high-affinity IGFBPs are expressed in human endometrium, the most abundant being IGFBP-1. This is secreted by predicidualized/decidualized endometrial stromal cells in late secretory phase endometrium and pregnancy decidua, i.e. under the action of progesterone. The primary negative regulator of IGFBP-1 expression is insulin, by inhibiting IGFBP-1 transcription. IGFBP-1 inhibits the receptor binding and biological action of IGF-I in the endometrium and in cultured human trophoblastic cells. These findings support the view that the IGF system has autocrine and paracrine functions in the regulation of endometrial proliferation and differentiation. After implantation , decidual IGFBP-1 may regulate IGF actions at the embryo-endometrial interface, since trophoblast cells contain IGF receptors and express IGF-II, but do not express IGFBP-1. Clinical conditions that are known to increase the risk of endometrial cancer are all characterized by the absence of IGFBP-1. Thus, like unopposed estrogen, unopposed IGF-I action may also lead to uncontrolled endometrial proliferation and favor the development of endometrial cancer. The measurement of mRNAs encoding the IGF system might provide a novel tool to evaluate the endometrial response to endogenous and exogenous estrogens and progestins at the molecular level.

L4 ANSWER 26 OF 42 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on

STN

ACCESSION NUMBER: 1998:370943 BIOSIS
DOCUMENT NUMBER: PREV199800370943
TITLE: Transforming growth factor-beta1, insulin-like growth factors, and insulin-like growth factor binding proteins in ovarian follicular fluid are differentially regulated by the type of ovarian hyperstimulation used for in vitro fertilization.
AUTHOR(S): Fried, Gabriel [Reprint author]; Wramsby, Hakan; Tally, Michael
CORPORATE SOURCE: Div. Obstetr. Gynecol., Reprod. Med. Cent., Dep. Women and Child Health, Karolinska Hosp., S-171 76 Stockholm, Sweden
SOURCE: Fertility and Sterility, (July, 1998) Vol. 70, No. 1, pp. 128-134. print.
CODEN: FESTAS. ISSN: 0015-0282.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 27 Aug 1998
Last Updated on STN: 21 Oct 1998

AB Objective: To determine the effects of hMG and highly purified FSH on follicular production of the ovarian growth factors transforming growth factor-beta1, (TGF-beta1), insulin-like growth factors I and II (IGF-I and IGF-II), and insulin-like growth factor binding proteins-1 and -3 (IGFBP-1 and IGFBP-3). Design: Controlled clinical study. Setting: University IVF program. Patient(s): One hundred twenty women who were <38 years old and had a >3-year duration of infertility in their present relationship participated in the study. Intervention(s): Follicular fluid and matched serum were collected at oocyte pick-up and analyzed for growth factors and E2 with the use of ELISA and RIA. Main Outcome Measure(s): Levels of TGF-beta1, IGF-I, IGF-II, IGFBP-1, and IGFBP-3 in follicular fluid and levels of E2 in serum were measured. Result(s): Compared with highly purified FSH, ovarian hyperstimulation with hMG produced lower levels of TGF-beta1 and IGF-I and higher levels of IGFBP-1. Levels of IGF -II and IGFBP-3 were similar with the 2 treatments. Conclusion(s): In patients undergoing IVF, the follicular expression of TGF-beta1, IGF-I, and IGFBP-1 was regulated differently by highly purified FSH compared with a preparation containing FSH and LH in a 1:1 ratio (hMG). The results indicate that FSH and LH control ovarian production of these growth factors differentially.

L4 ANSWER 27 OF 42 EMBASE

ACCESSION NUMBER: 97248077 EMBASE
DOCUMENT NUMBER: 1997248077
TITLE: Do changes in growth hormone levels correlate with IGF-I levels in patients undergoing IVF-ET?.
AUTHOR: Yohay D.; Lunenfeld E.; Giat Y.; Levy J.; Sharoni Y.; Potashnik G.; Glezerman M.
CORPORATE SOURCE: Dr. D. Yohay, Department of Obstetrics Gynecology, Soroka University Medical Center, POB 151, Beer Sheva, 84 101, Israel
SOURCE: Gynecological Endocrinology, (1997) Vol. 11, No. 4, pp. 269-274. .
Refs: 17
ISSN: 0951-3590 CODEN: GYENER
COUNTRY: United Kingdom
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 003 Endocrinology
010 Obstetrics and Gynecology
029 Clinical Biochemistry
037 Drug Literature Index
LANGUAGE: English
SUMMARY LANGUAGE: English

ENTRY DATE: Entered STN: 4 Sep 1997
Last Updated on STN: 4 Sep 1997

AB It has been suggested that adjunctive growth hormone (GH) therapy improves ovarian response and in vitro fertilization (IVF) outcome in specific groups of patients. The correlation between insulin-like growth factor (IGF) and GH is well established. The aim of this study was to determine whether changes in plasma GH correlate with IGF blood levels in patients during IVF treatment. Thirty-six women undergoing IVF and embryo transfer (ET) were examined. Ovarian stimulation was carried out by gonadotropin-releasing hormone agonists (GnRHa) and gonadotropins. Blood was drawn at the early and late follicular phase, on the day of human chorionic gonadotropin (hCG) injection and at the mid- and the late luteal phases. The samples were assayed for IGF-I, IGF-II, IGF-binding protein-3 (IGF BP-3), GH and estradiol. According to the IGF-I and GH plasma levels, patients were divided into three major groups: Group I consisted of patients in whom peak levels of GH reached more than 4 ng/ml and IGF-I decreased significantly. In this group, estradiol levels were 1863 ± 149 pg/ml. Group II consisted of patients in whom peak blood GH levels did not exceed 2.5 ng/ml and IGF-I level remained unchanged. In this group estradiol levels were 630 ± 57 pg/ml. Group III consisted of patients in whom blood GH levels were low and remined unchanged while estradiol levels were 1600 ± 420 pg/ml. In this group no significant increase in IGF levels were observed. There was no significant change in the levels of either IGF-II or IGF BP-3 in any of the groups. We can conclude that (1) there is a negative correlation between GH and IGF-I plasma levels in patients undergoing controlled ovarian hyperstimulation (COH)-IVF, when levels of estradiol and GH are elevated; (2) plasma levels of IGF-I under ovarian hyperstimulation are probably regulated by a multifactorial system; and (3) no correlation was found between the plasma levels of IGF-I and those of IGF-II and IGF BP-3 in all patient groups.

L4 ANSWER 28 OF 42 EMBASE

ACCESSION NUMBER: 97272092 EMBASE
DOCUMENT NUMBER: 1997272092
TITLE: Do changes in growth hormone levels correlate with IGF-I levels in patients undergoing IVF-ET?.
AUTHOR: Yohay D.; Lunenfeld E.; Giat Y.; Levy J.; Sharoni Y.; Potashnik G.; Glezerman M.
CORPORATE SOURCE: Dr. D. Yohay, Department of Obstetrics Gynecology, Soroka University Medical Center, POB 151, Beer Sheva 84 101, Israel
SOURCE: Gynaecological Endoscopy, (1997) Vol. 6, No. 4, pp. 269-274. .
Refs: 17
ISSN: 0962-1091 CODEN: GYNEEB
COUNTRY: United Kingdom
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 003 Endocrinology
010 Obstetrics and Gynecology
037 Drug Literature Index
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 25 Sep 1997
Last Updated on STN: 25 Sep 1997

AB It has been suggested that adjunctive growth hormone (GH) therapy improves ovarian response and in vitro fertilization (IVF) outcome in specific groups of patients. The correlation between insulin-like growth factor (IGF) and GH is well established. The aim of this study was to determine whether changes in plasma GH correlate with IGF blood levels in patients during IVF treatment. Thirty-six women undergoing IVF and embryo transfer (ET) were examined. Ovarian stimulation was carried out by gonadotropin-releasing hormones agonists (GnRHa) and gonadotropins. Blood

was drawn at the early and late follicular phase, on the day of human chronic gonadotropins (hCG) injection and at the mid- and the late luteal phases. The samples were assayed for IGF-I, IGF-II, IGF-binding protein-3 (IGF BP-3), GH and estradiol. According to the IGF-I and GH plasma levels, patients were divided into three major groups: Group I consisted of patients in whom peak levels of GH reached more than 4 ng/ml and IGF-I decreased significantly. In this group, estradiol levels were 1863 ± 149 pg/ml. Group II consisted of patients in whom peak blood GH levels did not exceed 2.5 ng/ml and the IGF-I level remained unchanged. In this group estradiol levels were 630 ± 57 pg/ml. Group III consisted of patients in whom blood GH levels were low and It has been suggested that adjunctive growth hormone (GH) therapy improves ovarian response and in vitro remained unchanged while estradiol levels were 1600 ± 420 pg/ml. In this group no significant increase in IGF levels were observed. There was no significant change in the levels of either IGF-II or IGF BP-3 in any of the groups. We can conclude that (1) there is a negative correlation between GH and IGF-I plasma levels in patients undergoing controlled ovarian hyperstimulation (COH)IVF, when levels of estradiol and CH are elevated; (2) plasma levels of IGF-I under ovarian hyperstimulation are probably regulated by a multifactorial system; and (3) no correlation was found between the plasma levels of IGF-I and those of IGF-II and IGF BP-3 in all patient groups.

L4 ANSWER 29 OF 42 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN

ACCESSION NUMBER: 1996:120341 BIOSIS
DOCUMENT NUMBER: PREV199698692476
TITLE: The ontogeny of growth hormone, insulin-like growth factors and sex steroids: Molecular aspects.
AUTHOR(S): Han, Victor K. M.
CORPORATE SOURCE: Lawson Res. Inst., 268 Grosvenor Street, London, ON N6A 4V2, Canada
SOURCE: Hormone Research (Basel), (1996) Vol. 45, No. 1-2, pp. 61-66.
CODEN: HRMRA3. ISSN: 0301-0163.
DOCUMENT TYPE: Article
General Review; (Literature Review)
LANGUAGE: English
ENTRY DATE: Entered STN: 27 Mar 1996
Last Updated on STN: 2 May 1996

AB Insulin-like growth factors (IGF-1 and IGF-2) are synthesized by many tissues in response to GH treatment and regulate cellular growth and differentiation. Fetal serum contains abundant GH, and many fetal tissues express GH receptors, but the clinical significance of GH in fetal development in humans is uncertain because hypopituitary newborns have normal birth size. The biological actions of IGFs are modulated by a family of binding proteins (IGFBPs). The demonstration of IGF and IGFBP transcripts in preimplantation embryos indicates that the influence of IGFs and IGFBPs in fetal development begins even prior to implantation. IGF and IGFBP mRNAs, except IGFBP-1 mRNA, are expressed at variable levels in many fetal tissues throughout gestation. Although the IGF mRNAs are widely expressed, IGFBP mRNAs manifest in specific cell types in a spatially and temporally specific manner, suggesting that they indicate sites of IGF action. Conditions of undernutrition and chronic hypoxemia, known to cause intrauterine growth retardation in fetuses, alter IGFBP and IGF-1 but not IGF-2 gene expression, thus indicating the role for IGF-1 and IGFBPs as mediators of altered growth. IGF and IGFBP genes are also expressed in many fetal endocrine tissues including those secreting sex steroids. Null mutation of the IGF-1 gene leads to retarded development of the primary sex organs. In the fetal adrenal gland, IGF-2 mRNA is localized to 3-beta-hydroxysteroid hydrogenase (3-beta-HSD) immunoreactive cells, suggesting a close relationship to steroid hormone biosynthesis.

IGFBPs are important paracrine modulators of IGF action during development, and are crucial regulators of cellular growth and differentiation by modulating IGF-dependent or -independent actions in all tissues including developing endocrine glands.

L4 ANSWER 30 OF 42 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN

ACCESSION NUMBER: 1996:291215 BIOSIS
DOCUMENT NUMBER: PREV199699013571
TITLE: Interrelationships between follicle stimulating hormone and the growth hormone-insulin-like growth factor-IGF-binding proteins axes in human granulosa cells in culture.
AUTHOR(S): Barreca, A. [Reprint author]; Artini, P. G.; Cesarone, A.; Arvigo, M.; D'Ambrogio, G.; Genazzani, A. R.; Giordano, G.; Minuto, F.
CORPORATE SOURCE: Dep. Endocrinol. Metabolism, DiSEM, Viale Benedetto XV no. 6, 16132 Genova, Italy
SOURCE: Journal of Endocrinological Investigation, (1996) Vol. 19, No. 1, pp. 35-42.
CODEN: JEIND7. ISSN: 0391-4097.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 25 Jun 1996
Last Updated on STN: 15 Aug 1996

AB As it has been hypothesized that IGF-binding proteins (IGFBPs) may have a role as autocrine/paracrine factors in regulating the local actions of the insulin-like growth factors (IGFs) in the ovary, we studied the production of the IGFBPs by human granulosa cells (GC) in culture and the role of IGFBP-3 in the modulation of ovarian cell responsiveness to IGF-I and FSH. To this purpose, human luteinIzIng GC were cultured in serum-free conditions for 24 h and subsequently submitted to increasing concentrations (2-8 nmol/l) of recombinant non-glycosylated or partially glycosylated IGF-BP-3 for 48 h, in the presence or absence of IGF-I, des(1-3)IGF-I - a truncated analog of human IGF-I with markedly reduced binding ability to IGFBPs - and FSH (5-20 mIU/ml). The results demonstrate that human GC release IGFBP-1-2 and -3 into the medium, and that FSH is able to inhibit this release, while GH is clearly inhibitory on IGFBP-1 and stimulatory on IGFBP-3. Both IGF-I and des(1-3)1GF-I significantly (p lt 0.001) stimulate E-2 production by human GC in culture in a manner comparable to that of FSH in the dose range used. Preincubation for 2 h at 22 C with IGFBP-3, to allow the formation of the IGF-IGFBP complex, drastically reduced the stimulatory effect of IGF-I but not that of des(1-3)IGF-I. IGFBP-3 was also able to inhibit the stimulatory effect of FSH. These data show that: i) the IGF peptide is less active when bound to IGFBP-3; ii) as IGFBP-3 does not affect the potency of des(1-3)1GF-I, its inhibitory action is exerted upstream of the membrane receptor binding; iii) as the action of IGFBP-3 is exerted by binding the IGF peptide, its inhibitory effect on FSH points out the role of the locally produced IGF-II in potentiating the FSH action on human GC.

L4 ANSWER 31 OF 42 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN

ACCESSION NUMBER: 1995:247939 BIOSIS
DOCUMENT NUMBER: PREV199598262239
TITLE: Administration of porcine somatotropin by sustained-release implant: Growth factor and metabolic responses in crossbred white and genetically lean and obese boars and gilts.
AUTHOR(S): Buonomo, F. C. [Reprint author]; Klindt, J.; Yen, J. T.
CORPORATE SOURCE: Anim. Sci. Div., Monsanto Co., St. Louis, MO 63198, USA
SOURCE: Journal of Animal Science, (1995) Vol. 73, No. 5, pp. 1318-1326.
CODEN: JANSAG. ISSN: 0021-8812.
DOCUMENT TYPE: Article

LANGUAGE: English
ENTRY DATE: Entered STN: 13 Jun 1995
Last Updated on STN: 13 Jun 1995

AB Differences in endocrine and metabolic responses to porcine somatotropin administered by daily injection or sustained-release implant (pSTSR) have been previously observed in genetically lean and obese, gilts and barrows. The current study extended those findings by examining responses to pST-SR in gilts and boars of a contemporary crossbred line, as well as lean and obese lines. Pigs were treated with 0, 1, or 2 pST-SR implants inserted subcutaneously behind the ear. The osmotically driven pST-SR implants delivered 2 mg of recombinant pST/d. Pigs were bled on d 0, 7, 14, 28, and 42 after implantation. Sera were assayed for pST, insulin-like growth factor (IGF)-I, IGF-II, IGF-binding protein-2 (IGFBP-2), insulin, glucose, and blood urea nitrogen (BUN). Circulating pST concentrations were increased in a dose-dependent manner (P lt .001) in the pST-SR treated pigs, but remained elevated (P lt .05) only in the 4 mg of pST-SR/d group on d 42. Significant effects of line, dose, time, line times dose, and time times dose were noted for IGF-I. Serum IGF-I was elevated in a dose-dependent manner over the 42-d period in all pST-treated swine. Examination of the line times dose times time interaction indicated that the IGF-I response to pSTSR was greatest in the obese line compared with the lean and crossbred lines. Conversely, serum IGF-II responded to pST-SR to the least extent in the obese pigs. Circulating IGFBP-2 concentrations were reduced by pST-SR, but were not affected by line. The BUN concentrations were reduced by pST-SR. An interaction of line times dose times time (P lt .001) indicated that the response was greater in the obese line. Line times dose times time interactions were also noted for insulin and glucose concentrations, which were elevated by pST-SR in a dose-response manner in all lines, but to a much greater extent in the obese pigs. These data confirm that sex and genotype influence the metabolic and endocrine responses to pST-SR, as demonstrated previously using daily injections of pST.

L4 ANSWER 32 OF 42 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 1995:306527 BIOSIS
DOCUMENT NUMBER: PREV199598320827
TITLE: Follicular fluid insulin-like growth factor-I and insulin-like growth factor-II concentrations vary as a function of day 3 serum follicle stimulating hormone.
AUTHOR(S): Seifer, David B. [Reprint author]; Giudice, Linda C.; Dsupin, Beth A.; Haning., Ray V., Jr.; Frishman, Gary N.; Burger, Henry G.
CORPORATE SOURCE: Div. Reproductive Endocrinol., Dep. Obstet., Brown University School Medicine, Women Infants Hospital, 101 Dudley Street,. Providence, RI 02905, USA
SOURCE: Human Reproduction (Oxford), (1995) Vol. 10, No. 4, pp. 804-806.
CODEN: HUREEE. ISSN: 0268-1161.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 11 Jul 1995
Last Updated on STN: 11 Jul 1995

AB We determined follicular fluid concentrations of insulin-like growth factor (IGF)-I, IGF-II and inhibin as a function of day 3 serum follicle stimulating hormone (FSH) in 16 women undergoing follicular fluid aspiration in preparation for in-vitro fertilization and embryo transfer. Follicular fluid concentrations of IGF-I and IGF -II were significantly less in the 'low' FSH group as compared to the 'high' FSH group. The mean IGF-I concentration was 67.6 ng/ml (confidence intervals (CI) 51.6-92.5) in the 'low' FSH group compared to 87.1 ng/ml (CI 72.8-104.2; P lt 0.025) in the 'high' FSH group. Mean IGF-II concentrations were 354.8 ng/ml (CI 297.8-422.9)

in the 'low' FSH group compared to 489.8 ng/ml (CI 384.6-624.5; P lt 0.05) in the 'high' FSH group. Follicular fluid inhibin concentrations did not differ between groups. These differences in follicular fluid IGF as a function of day 3 FSH may raise questions regarding the role growth factors play in the physiological processes of the ageing follicle.

L4 ANSWER 33 OF 42 MEDLINE on STN DUPLICATE 7
ACCESSION NUMBER: 96023920 MEDLINE
DOCUMENT NUMBER: PubMed ID: 7562340
TITLE: The potential role of bone morphogenetic proteins in periodontal reconstruction.
AUTHOR: Wozney J M
CORPORATE SOURCE: Genetics Institute, Cambridge, MA, USA.
SOURCE: Journal of periodontology, (1995 Jun) Vol. 66, No. 6, pp. 506-10. Ref: 34
Journal code: 8000345. ISSN: 0022-3492.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
LANGUAGE: English
FILE SEGMENT: Dental Journals; Priority Journals
ENTRY MONTH: 199511
ENTRY DATE: Entered STN: 27 Dec 1995
Last Updated on STN: 27 Dec 1995
Entered Medline: 2 Nov 1995

AB Growth factors and cytokines are currently under investigation as potential therapeutics for the site-specific regeneration of alveolar bone. Many of these factors, including TGF-beta, PDGF, IGF-I, IGF-II, and FGF influence bone growth and resorption, and as such may be useful in the regeneration process. However, these molecules have effects on many other tissue and cell types. In contrast, the bone morphogenetic proteins (BMPs) represent a unique set of differentiation factors that induce new bone formation at the site of implantation instead of changing the growth rate of pre-existing bone. Recombinant human BMP-2 (rhBMP-2), for example, has been shown to induce ectopic bone formation in an in vivo setting. Cell culture studies indicate that rhBMP-2 can cause mesenchymal precursor cells to differentiate into cartilage- and bone-forming cells. Additional animal studies have shown that rhBMP-2 is capable of replacing large (2.5 cm) defects in canine mandibles, healing a variety of long bone defects in orthopedic animal models, and repairing bony defects in animal models of bone lost due to periodontal disease. These results suggest that rhBMP-2 has broad therapeutic potential for dental and cranio/maxillofacial reconstruction.

L4 ANSWER 34 OF 42 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 1995:287744 BIOSIS
DOCUMENT NUMBER: PREV199598302044
TITLE: Relationship between serum estradiol concentration IGF-I, IGF-II and IFG-binding proteins in patients with premature ovarian failure on short-term estradiol therapy.
AUTHOR(S): Elias, A. N. [Reprint author]; Stone, S. C.; Pandian, M. R.; Tayyanipour, R.; Rohas, F. J.; Gwinup, G.
CORPORATE SOURCE: Dep. Med., Univ. California, Irvine, CA 92717, USA
SOURCE: Journal of Investigative Medicine, (1995) Vol. 43, No. SUPPL. 2, pp. 259A.
Meeting Info.: Clinical Research Meeting. San Diego, California, USA. May 5-8, 1995.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
Conference; (Meeting Poster)
LANGUAGE: English

ENTRY DATE: Entered STN: 5 Jul 1995
Last Updated on STN: 5 Jul 1995

L4 ANSWER 35 OF 42 MEDLINE on STN DUPLICATE 8
ACCESSION NUMBER: 96055328 MEDLINE
DOCUMENT NUMBER: PubMed ID: 8520621
TITLE: Relationship between serum estradiol concentration and IGF-I, IGF-II and IGF-binding proteins in patients with premature ovarian failure on short-term estradiol therapy.
AUTHOR: Elias A N; Stone S C; Tayyanipour R; Pandian M R; Rojas F J; Gwinup G
CORPORATE SOURCE: Department of Medicine and Obstetrics/Gynecology, University of California,Irvine, USA.
SOURCE: International journal of fertility and menopausal studies, (1995 Jul-Aug) Vol. 40, No. 4, pp. 196-201.
Journal code: 9309760. ISSN: 1069-3130.
PUB. COUNTRY: United States
DOCUMENT TYPE: (CLINICAL TRIAL)
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199601
ENTRY DATE: Entered STN: 19 Feb 1996
Last Updated on STN: 19 Feb 1996
Entered Medline: 22 Jan 1996

AB OBJECTIVE--Insulin-like growth factors (IGFs) exert stimulatory effects on follicular growth and development, and early embryogenesis. In view of this, we studied the effect of short-term estradiol treatment, as used in preparing the uterus for embryo implantation, on the serum concentrations of IGFs and their binding proteins (IGFBP) in patients with premature ovarian failure (POF). PATIENTS AND METHODS--Twenty-four patients with POF, enrolled in an assisted reproduction program, were treated with increasing doses of estradiol up to 8 mg daily for 6 weeks. Blood was sampled for measurement of serum estradiol, IGF-I, IGF -II, and IGFBP 1, 2 and 3 at various times during estradiol treatment. RESULTS--There was no significant correlation between serum estradiol concentrations and the serum concentrations of IGF-I and IGF-II. As expected, IGF-I and IGF-II concentrations in serum correlated positively with the serum concentration of IGFBP-3, the major IGF-binding protein in serum. CONCLUSION--The results of this study suggest that estradiol therapy as used to prepare the uterus for implantation has no significant effect on serum IGF-I and IGF-II concentrations, and therefore probably does not influence, via an IGF-mediated mechanism, the success of implantation and early embryonic development.

L4 ANSWER 36 OF 42 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 1995:42626 BIOSIS
DOCUMENT NUMBER: PREV199598056926
TITLE: Identification of insulin-like growth factor-binding protein-3 (IGFBP-3) fragments and IGFBP-5 proteolytic activity in human seminal plasma: A comparison of normal and vasectomized patients.
AUTHOR(S): Lee, Kok-Onn [Reprint author]; Oh, Youngman; Giudice, Linda C.; Cohen, Pinchas; Peehl, Donna M.; Rosenfeld, Ron G.
CORPORATE SOURCE: Div. Endocrinol., Dep. Med., Natl. Univ. Hosp., Lower Kent Ridge Rd., Singapore 0511, Singapore
SOURCE: Journal of Clinical Endocrinology and Metabolism, (1994) Vol. 79, No. 5, pp. 1367-1372.
CODEN: JCEMAZ. ISSN: 0021-972X.
DOCUMENT TYPE: Article
LANGUAGE: English

ENTRY DATE: Entered STN: 25 Jan 1995
Last Updated on STN: 26 Jan 1995

AB Previous studies have demonstrated that insulin-like growth factor (IGF) peptides, IGF-binding proteins (IGFBPs), and IGFBP-3 proteolytic activity, are present in human seminal plasma (SP). In this study, we have further characterized the IGFBPs in SP using immunoprecipitation and Western ligand blotting, Western immunoblotting, affinity cross-linking and immunoprecipitation, and RIA of IGFBP-3 using two different assays and have identified additional proteolytic activities for IGFBP-4 and IGFBP-5 in SP. Immunoprecipitation with antibodies to IGFBP-2, IGFBP-3, and IGFBP-4, before and after affinity cross-linking, demonstrated that intact IGFBP-2 and IGFBP-4 are present in SP, but intact IGFBP-3 is absent. Low mol wt fragments of IGFBP-3, which did not bind to IGF-I or IGF-II on Western ligand blot and did not cross-link to IGF-II, were demonstrated on Western immunoblot and were measurable by two different RIAs. Proteolytic activities for IGFBP-4 and IGFBP-5 were demonstrated in SP by incubation with the respective iodinated IGFBPs. On comparing the proteolytic activity for IGFBP-4 by purified prostate-specific antigen (PSA; a known IGFBP-3 protease in SP) or by SP with measured equivalent concentrations of PSA, the dose response and fragment patterns were identical. With IGFBP-5, however, proteolysis by purified PSA was different from that by SP with measured equivalent concentrations of PSA: 1) proteolysis by pure PSA was less efficient than matched concentrations of SP; 2) the pattern of fragments after proteolysis by pure PSA was different from that after proteolysis by matched concentrations of SP; and 3) proteolysis by purified PSA was significantly inhibited by phenylmethylsulfonylfluoride and aprotinin, but proteolysis by SP was not. We conclude that human SP contains intact IGFBP-2 and IGFBP-4, but has only IGFBP-3 fragments with low affinity for IGF peptides; that PSA is able to proteolyze IGFBP-4 and IGFBP-5 (as well as IGFBP-3); and that an additional IGFBP-5 protease is probably present in SP. There was no significant difference in any of these findings in SP from normal volunteers, vasectomized patients, or patients with idiopathic azoospermia. The roles of IGFBPs and IGFBP proteases in the male reproductive system and male infertility remain to be further elucidated.

L4 ANSWER 37 OF 42 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN

ACCESSION NUMBER: 1995:42511 BIOSIS
DOCUMENT NUMBER: PREV199598056811
TITLE: The insulin-like growth factor system in human peritoneal fluid: Its effects on endometrial stromal cells and its potential relevance to endometriosis.
AUTHOR(S): Giudice, Linda C. [Reprint author]; Dsupin, B. A.; Gargosky, S. E.; Rosenfeld, R. G.; Irwin, J. C.
CORPORATE SOURCE: Dep. Gynecol. Obstet., Stanford Univ. Med. Cent., Room HH-333, Stanford, CA 94305, USA
SOURCE: Journal of Clinical Endocrinology and Metabolism, (1994) Vol. 79, No. 5, pp. 1284-1293.
CODEN: JCEMAZ. ISSN: 0021-972X.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 25 Jan 1995
Last Updated on STN: 26 Jan 1995

AB Peritoneal fluid (PF) lines the abdomen and pelvis and is believed to contain growth factors that stimulate endometriosis, a benign gynecological condition associated with pelvic pain and infertility, in which endometrial cells proliferate and differentiate on the pelvic peritoneum, outside of their normal location within the uterus. In this study, we examined the insulin-like growth factor (IGF) system in seven paired samples of PF and serum from normally cycling women and examined the mitogenic potential of this fluid on cultured endometrial stromal cells. IGF-I, IGF-II,

and IGF-binding protein-1 (IGFBP-1), -2, -3, and -4 were identified in PF by immunoassays. PF IGF levels, determined by RIA, were approximately 60% of paired serum levels, and PF levels of IGFBP-2 and IGFBP-3, determined by Western ligand blotting and RIA, respectively, were approximately half of their serum concentrations. IGFBP-4 was barely detectable by Western ligand blotting in PF, and levels of IGFBP-1, determined by immunoassay, were not appreciably different in PF and serum. Incubation of (125I) IGF-II with serum and PF and subsequent size-exclusion chromatography at neutral pH revealed approximately equal incorporation of radiolabel in the IGFBP regions of 150 and 44 kilodaltons (kDa) in serum and primarily in the 44-kDa region in PF. RIA of IGFBP-3 in the IGFBP regions of column effluent revealed that the majority of IGFBP-3 was in the 150-kDa region in both serum and PF, suggesting the presence of the ternary complex in PF. Western ligand blotting of column effluent samples revealed 37-/43-kDa IGFBP-3 primarily in the 150-kDa complex in serum and a marked reduction in the amount of the 37-/43-kDa IGFBP in PF. Western immunoblotting of column effluent with IGFBP-3 antiserum revealed immunoreactive IGFBP-3 forms of 37-43 kDa (major) and 28 kDa (minor) in serum and almost exclusively the 28-kDa band in PF, suggesting that IGFBP-3 in PF may be proteolytically processed. The presence of an IGFBP-3 protease was confirmed using (125I)IGFBP-3 as substrate and was not appreciably present in paired serum samples. Inhibitor profiles demonstrated that this protease is a metal-independent serine protease, and its approximate relative molecular mass was estimated to be 69 kDa, determined by size-exclusion chromatography. The mitogenic potential of IGF peptides and PF was assessed on cultured endometrial stromal cells to test the hypothesis that IGFs in PF may stimulate the growth of endometrium in the pelvic cavity, for example in the disorder of endometriosis. IGF-I and IGF-II were mitogenic to endometrial stromal cells, and maximum growth stimulation occurred at 10 and 50 ng/mL, respectively. PF was also mitogenic to endometrial stromal cells in a dose-dependent fashion, and this mitogenic effect was inhibited up to 30% in the presence of alpha-IR3, a blocking antibody to the type I IGF receptor. These data demonstrate that the IGF system (IGF peptides, IGFBPs, and an IGFBP protease) is present in human PF. Furthermore, they suggest that the IGF system may be one of several growth factor systems in PF that has the capacity to stimulate endometrial cellular proliferation and may participate in the growth of ectopic endometrium on the pelvic peritoneum, as in the disorder of endometriosis.

L4 ANSWER 38 OF 42 EMBASE

ACCESSION NUMBER: 94091238 EMBASE
DOCUMENT NUMBER: 1994091238
TITLE: Characterization, localization, and regulation of receptors for insulin- like growth factor I in the baboon uterus during the cycle and pregnancy.
AUTHOR: Hild-Petito S.; Verhage H.G.; Fazleabas A.T.
CORPORATE SOURCE: Department of Obstetrics/Gynecology, University of Illinois, M/C 808, 820 S. Wood Street,Chicago, IL 60612-7313, United States
SOURCE: Biology of Reproduction, (1994) Vol. 50, No. 4, pp. 791-801. .
ISSN: 0006-3363 CODEN: BIREBV
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 021 Developmental Biology and Teratology
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 14 Apr 1994
Last Updated on STN: 14 Apr 1994

AB The objective of this study was to determine the presence, regulation, and localization of specific receptors for insulin-like growth factor I (IGF-I) in primate reproductive tissues. Uteri were obtained from baboons

either during the menstrual cycle, after ovariectomy with or without steroid treatments, or during early pregnancy (Days 18-60 postovulation [PO]). Placental and decidual tissues were collected from baboons during late pregnancy (Days 130-160). Localization of type I IGF receptor was determined by indirect immunocytochemistry (αIR3 antibody), and levels of type I IGF receptors were determined by affinity cross-linking and binding assays. Specific staining for type I IGF receptors was present in the membranes of glandular epithelial cells throughout the cycle and early pregnancy; however, there was a decrease in staining intensity by the late luteal phase and also throughout early pregnancy compared to the late follicular phase. Specific receptor staining was absent in stromal cells throughout the cycle. By Day 19 PO, stromal cells directly under the trophoblast were positive for type I IGF receptor, and an increase in stromal staining at the implantation site was observed as pregnancy proceeded. Stromal staining was apparent in non-implantation site tissue by Day 32 PO. Some placental villi showed positive receptor staining as early as on Day 18 PO, and an increase in the number of positive villi was apparent as pregnancy progressed. An 125I-IGF-I- protein complex of approximately 140 000 daltons, corresponding to the α subunit of the type I IGF receptor, was detected in endometrial, placental, and decidual membranes. The intensity of this signal was high in endometrium from the follicular phase, whereas low levels were detected in endometrium from the luteal phase. Throughout early pregnancy, α receptor subunit was present in placental and decidual membranes; α receptor subunit increased in placenta as pregnancy proceeded. An additional 125I-IGF-I-protein complex of 43 000 daltons, corresponding to IGF binding protein-I (IGFBP-I), was present in decidual membranes and appeared to increase as pregnancy proceeded. Specific binding of 125I-IGF-I to placental membranes was displaced by unlabeled IGF-I and αIR3 antibody, whereas both unlabeled IGF- I and IGF-II competed equally for binding to decidual membranes. Scatchard analysis of 125I-IGF-I binding to placental membranes revealed a single class of high-affinity receptors (K(D) = 2.35 ± 0.8 nM; mean ± SEM). These data indicate that the majority of 125I-IGF-I binding to decidual membranes is due to the presence of IGFBP-I, whereas placental membranes contain primarily type I IGF receptors. The data also suggest that type I IGF receptor is hormonally regulated and support the hypothesis that IGF-I mediates stromal/epithelial and trophoblast/maternal interactions via the type I IGF receptor.

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ACCESSION NUMBER: 1994:444307 BIOSIS
DOCUMENT NUMBER: PREV199497457307
TITLE: Effect of growth factors in bovine blastocyst development in a serum free medium.
AUTHOR(S): Shamsuddin, M.
CORPORATE SOURCE: Dep. Obstet. Gynaecol., Swedish Univ. Agric. Sci., S-750 07 Uppsala, Sweden
SOURCE: Acta Veterinaria Scandinavica, (1994) Vol. 35, No. 2, pp. 141-147.
CODEN: AVSCA7. ISSN: 0044-605X.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 24 Oct 1994
Last Updated on STN: 24 Oct 1994

AB To investigate the effect of growth factors on pre-implantation development, bovine zygotes, produced by in vitro fertilization (IVF) of in vitro-matured (IVM) oocytes, were cultured in a serum-free medium to which the following growth factors were added one at a time: epidermal growth factor (EGF), acidic fibroblast growth factor (a-FGF), insulin-like growth factor-II (IGF-II), platelet-derived growth factor from human platelets (PDGF), and platelet-derived growth factor-AB,

human, recombinant (PDGF-AB). All growth factors were added at a dose of either 10 or 50 ng/ml, except PDGF which was added at a dose of either 5 or 15 ng/ml. The control medium was TCM 199 supplemented with sodium pyruvate (0.25 mmol/l), BSA (10 mg/ml), insulin (5 pg/ml), transferrin (5 mu-g/ml), and sodium selenite (5 ng/ml). Embryos were cultured for 8 days (day of insemination = Day 0). The mean percentages of first cleavage on Day 2 varied from 67% to 86% and the differences between the 2 doses, or between the control and growth factor-treated groups were not significant (p gtoreq 0.13). The effects of the two doses on subsequent development up to the blastocyst stage did not differ either (p gtoreq 0.12). There was no stimulatory effect of any of the used exogenous growth factors on embryo development up to the morula or blastocyst stage on Day 7, or blastocyst stage on Day 8. Moreover, medium supplemented with PDGF had fewer blastocysts than the control (p ltoreq 0.03). The results indicate that growth factor supplementation may not necessarily increase the yield of blastocysts from bovine IVM-IVF oocytes in a serum-free medium.

L4 ANSWER 40 OF 42 MEDLINE on STN
ACCESSION NUMBER: 93209458 MEDLINE
DOCUMENT NUMBER: PubMed ID: 7681413
TITLE: Insulin-like growth factor II in follicular fluid of the patients with in vitro fertilization and embryo transfer.
AUTHOR: Kubota T; Kamada S; Ohara M; Taguchi M; Sakamoto S; Shimizu Y; Aso T
CORPORATE SOURCE: Department of Obstetrics and Gynecology, Faculty of Medicine, Tokyo Medical and Dental University, Japan.
SOURCE: Fertility and sterility, (1993 Apr) Vol. 59, No. 4, pp. 844-9.
Journal code: 0372772. ISSN: 0015-0282.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199304
ENTRY DATE: Entered STN: 14 May 1993
Last Updated on STN: 29 Jan 1996
Entered Medline: 23 Apr 1993

AB OBJECTIVE: To investigate whether insulin-like growth factor II (IGF-II) is present in follicular fluids (FF) and whether IGF-II in FF plays an important role on human ovarian function. DESIGN, SETTING, PATIENTS: Insulin-like growth factor II concentrations were measured using an RIA technique in 46 samples of human FF obtained from 20 patients who were undergoing IVF and ET. The distribution profiles of unsaturated IGF-II binding protein were also investigated. Moreover, the effect of IGF-II on steroidogenesis by cultured granulosa cells (GCs) obtained simultaneously in the IVF-ET program was investigated. RESULTS: The IGF-II levels in FF (92.7 +/- 7.5 nmol/L) were approximately eight times greater than those of IGF-I (11.4 +/- 1.0 nmol/L), and significant positive correlations were observed between these IGFs in FF. By Sephadex G-150 gel-chromatography of FF, two apparent peaks of unsaturated IGF-II binding protein could be detected in the high molecular weight (MW) (150 kd) and low MW (approximately 36 to 38 kd) regions. Additionally, IGF-II dose dependently increased the release of P and E2 from the cultured human GCs. CONCLUSIONS: These findings suggest that the large quantity of IGF-II in FF may play possibly some roles in the ovarian steroidogenesis.

L4 ANSWER 41 OF 42 MEDLINE on STN DUPLICATE 9
ACCESSION NUMBER: 93315614 MEDLINE
DOCUMENT NUMBER: PubMed ID: 8325961
TITLE: In vivo and in vitro effect of growth hormone on estradiol secretion by human granulosa cells.

AUTHOR: Barreca A; Artini P G; Del Monte P; Ponzani P; Pasquini P; Cariola G; Volpe A; Genazzani A R; Giordano G; Minuto F
CORPORATE SOURCE: Department of Endocrinology and Metabolism, Universita di Genova, Italy.
SOURCE: The Journal of clinical endocrinology and metabolism, (1993 Jul) Vol. 77, No. 1, pp. 61-7.
Journal code: 0375362. ISSN: 0021-972X.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
ENTRY MONTH: 199308
ENTRY DATE: Entered STN: 20 Aug 1993
Last Updated on STN: 20 Aug 1993
Entered Medline: 6 Aug 1993

AB GH therapy increases the ovarian response to gonadotropin stimulation in women presenting with ovaries that are relatively resistant to conventional gonadotropin therapy. As it is not completely certain whether GH modulates the actions of FSH on granulosa cells directly or via insulin-like growth factor-I (IGF-I) production, we studied its effect on steroid release by human granulosa cells obtained from subjects affected by unexplained or male factor infertility . In all subjects, superovulation for in vitro fertilization/embryo transfer was induced by treatment with gonadotropins or GH plus gonadotropins combined. The effects of the different in vivo treatments were evaluated in the conditioned medium obtained after the first 24 h of incubation; granulosa cells from patients treated with GH released higher amounts of estradiol and progesterone into the medium than did granulosa cells from patients treated with gonadotropins alone. When the release of steroid due to the in vivo treatment was exhausted, cells were subjected to increasing concentrations of GH in the presence or absence of 200 nmol anti-IGF Sm 1.2 monoclonal antibody (MoAb) or the antitype I receptor alpha IR3 MoAb. The results revealed that GH stimulates estradiol production in a dose-dependent fashion, and the presence of the MoAbs drastically reduces the GH effect. These data demonstrate that the established stimulatory effect of GH on ovarian function is dependent not only on the increased levels of circulating IGF-I, but also on a direct effect of GH on granulosa cells, which seems to be mediated at least in part by the autocrine action of IGF, particularly IGF-II . In fact, chromatographic analysis of medium conditioned by human granulosa cells revealed that these cells clearly produce IGF-II and IGF-binding proteins and only small amounts of IGF-I. Since GH appears to be able to increase the in vitro effect of both IGF-I and IGF-II, we can hypothesize a sensitization of the granulosa cells to the IGF-II produced by the cells themselves, which acts through the IGF-I receptor.

L4 ANSWER 42 OF 42 MEDLINE on STN
ACCESSION NUMBER: 92256752 MEDLINE
DOCUMENT NUMBER: PubMed ID: 1813001
TITLE: Polycystic ovary syndrome: evolution of a concept.
AUTHOR: Ruutiainen K; Seppala M
CORPORATE SOURCE: Department of Obstetrics and Gynecology, Turku University Central Hospital, Finland.
SOURCE: Current opinion in obstetrics & gynecology, (1991 Jun) Vol. 3, No. 3, pp. 326-35. Ref: 56
Journal code: 9007264. ISSN: 1040-872X.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199206
ENTRY DATE: Entered STN: 26 Jun 1992

Last Updated on STN: 29 Jan 1999
Entered Medline: 15 Jun 1992

AB Despite improved diagnostic facilities and advanced in vitro studies, the primary causes of the polycystic ovary syndrome (PCOS) have not been resolved. In addition to certain enzyme deficiencies causing a PCOS-like state, current evidence indicates altered functions of 5 alpha-reductase and cytochrome P450c17 alpha in PCOS patients as a group. However, it is not obvious if these are primary or secondary to the abnormal hormonal milieu. The relation of insulin-like growth factors (IGFs) to PCOS is of particular interest in view of the occurrence of IGF-II mRNA in the granulosa cells and the ability of IGF-I to regulate the granulosa cell and thecal-interstitial cell functions. In obese PCOS patients, the levels of sex hormone binding globulin and IGF-binding protein-1 are subnormal in serum, and fasting increases them. Fasting also suppresses high insulin and IGF-I concentrations in the same women. Growth hormone, regulated by insulin and probably by IGF-I, appears to be decreased in PCOS patients. Follicular growth, characteristically arrested in PCOS, is regulated by growth hormone to some extent, and growth hormone treatment has been found to improve the ovarian response to gonadotropins in some but not all anovulatory patients. In addition to the administration of growth hormone itself, therapeutic measures modulating the growth hormone-ovarian axis are being studied. High serum luteinizing hormone levels are typical of PCOS. These are often associated with infertility and early pregnancy loss. Lowering of the luteinizing hormone levels by a gonadotropin-releasing hormone analogue in combination with gonadotropins improves the outcome of pregnancies as compared with those achieved by clomiphene citrate. The use of the former regimen in PCOS patients may result in ovarian hyperstimulation. Ovarian electrocautery has proved to be effective in restoring cyclicity of ovarian function with a concomitant fall in luteinizing hormone and androgen levels. Interestingly, an increase in serum insulin secretion has been noted. It remains to be elucidated if this therapy, followed by decreased luteinizing hormone, is effective in reducing the elevated risk of miscarriages in women with PCOS.

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 NEWS  7  MAY 19   Derwent World Patents Index to be reloaded and enhanced
 NEWS  8  MAY 30   IPC 8 Rolled-up Core codes added to CA/CAplus and
                   USPATFULL/USPAT2
 NEWS  9  MAY 30   The F-Term thesaurus is now available in CA/CAplus
 NEWS 10  JUN 02   The first reclassification of IPC codes now complete in
                   INPADOC
 NEWS 11  JUN 26   TULSA/TULSA2 reloaded and enhanced with new search and
                   and display fields
 NEWS 12  JUN 28   Price changes in full-text patent databases EPFULL and PCTFULL
 NEWS 13  JUl 11   CHEMSAFE reloaded and enhanced
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=> s (IGF(W)II OR IGF(W)2 OR INSULIN(W)GROWTH(W)FACTOR(W)II) AND (infertility or
implantation or or miscarriage or pre(w)eclampsia or placental(w)abruption)
MISSING TERM 'OR OR'
The search profile that was entered contains a logical
operator followed immediately by another operator.

=> s (IGF(W)II OR IGF(W)2 OR INSULIN(W)GROWTH(W)FACTOR(W)II)
L1        19714 (IGF(W) II OR IGF(W) 2 OR INSULIN(W) GROWTH(W) FACTOR(W) II)

=> s l1 AND (infertility or implantation or or miscarriage or pre(w)eclampsia or
placental(w)abruption)
MISSING TERM 'OR OR'
The search profile that was entered contains a logical
operator followed immediately by another operator.

=> s l1 AND (infertility or implantation or miscarriage or pre(w)eclampsia or
placental(w)abruption)
L2          292 L1 AND (INFERTILITY OR IMPLANTATION OR MISCARRIAGE OR PRE(W)
                ECLAMPSIA OR PLACENTAL(W) ABRUPTION)

=> and (medic? or therap?)
AND IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).

=> s l2 and (medic? or therap?)
L3           59 L2 AND (MEDIC? OR THERAP?)

=> dup rem
ENTER L# LIST OR (END):l3
PROCESSING COMPLETED FOR L3
L4            42 DUP REM L3 (17 DUPLICATES REMOVED)

=> dis ibib abs l4 1-10

L4   ANSWER 1 OF 42  EMBASE  COPYRIGHT (c) 2006 Elsevier B.V. All rights
     reserved on STN
ACCESSION NUMBER:    2006355037  EMBASE
TITLE:               Pregnancy-induced changes in insulin-like growth factor I
                     (IGF-I), insulin-like growth factor binding protein 3
                     (IGFBP-3), and acid-labile subunit (ALS) in patients with
                     growth hormone (GH) deficiency and excess.
AUTHOR:              Wiesli P.; Zwimpfer C.; Zapf J.; Schmid C.
CORPORATE SOURCE:    P. Wiesli, Department of Internal Medicine, Endocrinology
                     and Diabetes, Kantonsspital Frauenfeld, CH-8501 Frauenfeld,
                     Switzerland. peter.wiesli@stgag.ch
SOURCE:              Acta Obstetricia et Gynecologica Scandinavica, (1 Jul 2006)
                     Vol. 85, No. 8, pp. 900-905. .
                     Refs: 26
                     ISSN: 0001-6349  E-ISSN: 1600-0412  CODEN: AOGSAE
```

PUBLISHER IDENT.: JNG3570J4RGR7541
COUNTRY: United Kingdom
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 003 Endocrinology
010 Obstetrics and Gynecology
037 Drug Literature Index
038 Adverse Reactions Titles
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 18 Aug 2006
Last Updated on STN: 18 Aug 2006

AB Background. Under most circumstances with altered growth hormone (GH) secretion, the changes of insulin-like growth factor I (IGF-I), insulin-like growth factor binding protein 3 (IGFBP-3), and acid-labile subunit (ALS) are in parallel. The aim of the present study was to compare the effects of pregnancy in a hypopituitary patient with those of pregnancy in an acromegalic patient on IGF-I, IGFBP-3, and ALS. Methods and results. IGF-I and ALS were low before pregnancy in the hypopituitary patient under glucocorticoid and thyroxine treatment. Gonadotropin treatment allowed her to become pregnant; IGF-I and ALS levels rose in the second half of pregnancy and fell again after delivery. IGF-I concentrations were elevated in the patient with persistent acromegaly before and dropped into the normal range during the first half of pregnancy. In the second half of pregnancy and following delivery, IGF-I levels increased again. IGFBP-3 levels (as assessed by immunoblot analysis as well as by 125 I-IGF II ligand blotting) decreased markedly during pregnancy in both patients, suggesting that the placenta rather than pituitary GH regulates IGFBP-3 proteolysis in human pregnancy. The increase of IGF-I (and ALS) during the second half of pregnancy in the individual with pituitary GH deficiency may be attributed to placental GH. The fall of IGF-I (and ALS) into the normal range in the acromegalic patient during the first trimester of pregnancy may be related to decreased production or decreased half-life of these proteins. Conclusion. Our data suggest that measures to continuously replace GH or to suppress GH secretion during pregnancy in patients with GH deficiency or excess, respectively, may not be warranted. .COPYRGT. 2006 Taylor & Francis.

L4 ANSWER 2 OF 42 MEDLINE on STN DUPLICATE 1
ACCESSION NUMBER: 2006205532 MEDLINE
DOCUMENT NUMBER: PubMed ID: 16470809
TITLE: Enhancement of myoblast microencapsulation for gene therapy.
AUTHOR: Li Anna Aihua; Shen Feng; Zhang Tao; Cirone Pasquale; Potter Murray; Chang Patricia L
CORPORATE SOURCE: Department of Pediatrics, McMaster University, Health Sciences Centre, Room 3N19, 1200 Main Street West, Hamilton, Ontario, Canada L8N 3Z5.
SOURCE: Journal of biomedical materials research. Part B, Applied biomaterials, (2006 May) Vol. 77, No. 2, pp. 296-306. Journal code: 101234238. ISSN: 1552-4973.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200607
ENTRY DATE: Entered STN: 14 Apr 2006
Last Updated on STN: 1 Aug 2006
Entered Medline: 31 Jul 2006

AB One method of nonviral-based gene therapy is to implant microencapsulated nonautologous cells genetically engineered to secrete the desired gene products. Encapsulating the cells within a biocompatible permselective hydrogel, such as alginate-poly-L-lysine-alginate (APA), protects the foreign cells from the host immune system while allowing

diffusion of nutrients and the therapeutic gene products. An important consideration is which kind of cells is the best candidate for long-term implantation. Our previous work has shown that proliferation and differentiation of encapsulated C2C12 myoblasts in vitro are significantly improved by inclusion of basic fibroblast growth factor (bFGF), insulin growth factor II (IGF-II), and collagen within the microcapsules ("enhanced" capsules). However, the effects of such inclusions on the functional status of the microcapsules in vivo are unknown. Here we found that comparing the standard with the enhanced APA microcapsules; there was no difference in the rates of diffusion of recombinant products of different sizes, that is, human factor IX (FIX, 65 kDa), murine IgG (150 kDa), and a lysosomal enzyme, beta-glucuronidase (300 kDa), thus providing a key requirement of such an immunoprotective device. Furthermore, the creatine phosphokinase activity and myosin heavy chain staining (markers for differentiation of the myoblasts) and the cell number per capsule in the enhanced microcapsules indicated a higher degree of differentiation and proliferation when compared to the standard microcapsules, thus demonstrating an improved microenvironment for the encapsulated cells. Efficacy was tested in a melanoma cancer tumor model by treating tumor induced by B16-F0/neu tumor cells in mice with myoblasts secreting angiostatin from either the standard or enhanced APA microcapsules. Mice treated with enhanced APA-microcapsules had an 80% reduction in tumor volume at day 21 compared to a 70% reduction in those treated with standard APA-microcapsules. In conclusion, enhancement of APA microcapsules with growth factors and collagen did not adversely affect their permeability property and therapeutic efficacy. However, the enhanced differentiation and viability of the encapsulated myoblasts in vivo should be advantageous for long-term delivery with this method of gene therapy.

L4 ANSWER 3 OF 42 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 2006:365596 BIOSIS
DOCUMENT NUMBER: PREV200600356089
TITLE: Aspects of placental growth hormone physiology.
AUTHOR(S): Fuglsang, Jens [Reprint Author]; Ovesen, Per
CORPORATE SOURCE: Aarhus Univ Hosp, Gynaecol Obstet Res Lab Y, Skejby Sygehus, DK-8200 Aarhus N, Denmark
Fuglsang@ki.au.dk
SOURCE: Growth Hormone & IGF Research, (APR 2006) Vol. 16, No. 2, pp. 67-85.
ISSN: 1096-6374.
DOCUMENT TYPE: Article
General Review; (Literature Review)
LANGUAGE: English
ENTRY DATE: Entered STN: 19 Jul 2006
Last Updated on STN: 19 Jul 2006

AB Placental growth hormone (PGH) has been known for 20 years. Nevertheless, its physiology is far from understood. In this review, basal aspects of PGH physiology are summarised and put in relation to the highly homologous pituitary growth hormone (GH). During normal pregnancy, PGH progressively replaces GH and reach maximum serum concentrations in the third trimester. A close relationship to insulin-like growth factor (IGF)-I and -II levels is observed. Furthermore, PGH levels are positively associated to fetal growth. The potential importance of growth hormone receptors and binding protein for PGH effects is discussed. Finally, the review outlines current knowledge of PGH in pathological pregnancies.

L4 ANSWER 4 OF 42 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:1189186 CAPLUS
DOCUMENT NUMBER: 143:461625
TITLE: Preparation of growth factor slow release nanofiber

system for tissue engineering
INVENTOR(S): Hu, Ping; Shi, Yiping; Fang, Zhuangxi
PATENT ASSIGNEE(S): Tsinghua University, Peop. Rep. China
SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 6 pp.
CODEN: CNXXEV
DOCUMENT TYPE: Patent
LANGUAGE: Chinese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1584143	A	20050223	CN 2004-10048040	20040611
PRIORITY APPLN. INFO.:			CN 2004-10048040	20040611

AB Title growth factor slow release nanofiber system for reparation therapy of defect tissues is prepared by compounding biodegradable polymer with growth factor in a nontoxic solvent and then prepare nanofiber slow release system by elec. spinning. The biodegradable material is selected from polyhydroxycarboxylic acids, polyβ-hydroxybutyrate, polyβ-hydroxyvalerate, polyβ-hydroxycaproate, polylactide, polyglycolide, caprolactone-lactide-glycolide copolymer, polycarbonate, polyurethane, proteins, polyvinyl alc., chitosan, and gelatin, and the growth factor is bone-derived growth factor, pancreas islet cell growth factor, and etc. The prepared product release growth factor at constant speed in vivo to avoid the deactivation of the growth factor and promote cell proliferation and tissue repair in long term, and therefore can be made into membrane for implantation into defect tissues to assist the therapy, or directly made into tissue engineering scaffold for planting and culturing cells in vitro, so as to allow the cell to multiply into tissue substitute for implantation into body for tissue repair.

L4 ANSWER 5 OF 42 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 2005:399151 BIOSIS
DOCUMENT NUMBER: PREV200510191699
TITLE: Placentation in the African elephant, Loxodonta africanus: III. Ultrastructural and functional features of the placenta.
AUTHOR(S): Wooding, F. B. P. [Reprint Author]; Stewart, F.; Mathias, S.; Allen, W. R.
CORPORATE SOURCE: Univ Cambridge, Dept Physiol, Downing St, Cambridge CB2 3EG, UK
fbpw2@cam.ac.uk
SOURCE: Placenta, (JUL 2005) Vol. 26, No. 6, pp. 449-470.
CODEN: PLACDF. ISSN: 0143-4004.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 5 Oct 2005
Last Updated on STN: 5 Oct 2005

AB Successful transfer of nutrients to the elephant fetus during pregnancy relies on a variety of placental modifications. Our light and electron microscopical investigations show that the structure is endotheliochorial from implantation to term, with unicellular, never syncytial trophoblast. Light and electron microscope immunocytochemistry shows the restriction of the glucose transporter I isoform to the basolateral surfaces of the trophoblast, with the glucose transporter 3 restricted to the apical plasmalemma of the trophoblast. Glucose transport to the fetus therefore requires a sequential use of both isoforms. Light and electron microscope cytochemistry indicate the presence of iron deposits only in the haemophagous zones confirming their iron transport function. No trophoblast areas with high concentrations of Calcium binding protein, specialised for Calcium transport were found. In situ hybridisation demonstrated the presence of IGF-II mRNA in the trophoblast from the earliest stage, with TGF beta 1 and HGF-SF mRNA

expressed subsequently but only IGF-II and HGF mRNA present in the second half of pregnancy.The results are briefly discussed in terms of placental growth and function and indicate that the elephant placenta is another example of a unique solution to the variety of problems posed by a resident fetus. (c) 2004 Elsevier Ltd. All rights reserved.

L4 ANSWER 6 OF 42 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 2005:277077 BIOSIS
DOCUMENT NUMBER: PREV200510069989
TITLE: Estimation of sperm deoxyribonucleic acid damage by gene-specific polymerase chain reaction (PCR) analysis.
AUTHOR(S): San Gabriel, Maria; Zhang, Xiaoyang; Zini, Armand
SOURCE: Journal of Andrology, (MAR-APR 2005) pp. 59.
Meeting Info.: 30th Annual Meeting of the American-Society-of-Andrology. Seattle, WA, USA. March 30 -April 05, 2005. Amer Soc Androl.
CODEN: JOAND3. ISSN: 0196-3635.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LANGUAGE: English
ENTRY DATE: Entered STN: 27 Jul 2005
Last Updated on STN: 27 Jul 2005

L4 ANSWER 7 OF 42 MEDLINE on STN DUPLICATE 2
ACCESSION NUMBER: 2005488912 MEDLINE
DOCUMENT NUMBER: PubMed ID: 16159864
TITLE: Myocardial insulin-like growth factor-I gene expression during recovery from heart failure after combined left ventricular assist device and clenbuterol therapy
AUTHOR: Barton Paul J R; Felkin Leanne E; Birks Emma J; Cullen Martin E; Banner Nicholas R; Grindle Suzanne; Hall Jennifer L; Miller Leslie W; Yacoub Magdi H
CORPORATE SOURCE: National Heart and Lung Institute, Imperial College London, Heart Science Centre, London, UK.. p.barton@imperial.ac.uk
SOURCE: Circulation, (2005 Aug 30) Vol. 112, No. 9 Suppl, pp. I46-50.
Journal code: 0147763. E-ISSN: 1524-4539.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
ENTRY MONTH: 200602
ENTRY DATE: Entered STN: 15 Sep 2005
Last Updated on STN: 22 Feb 2006
Entered Medline: 21 Feb 2006

AB BACKGROUND: Patients who undergo mechanical support with a left ventricular assist device (LVAD) exhibit reverse remodeling and in some cases recover from heart failure. We have developed a combination therapy using LVAD support combined with pharmacological therapy to maximize reverse remodeling, followed by the beta2 adrenergic agonist clenbuterol. We recently found that clenbuterol induces insulin-like growth factor I (IGF-I) in cardiac myocytes in vitro. The purpose of this study is to examine IGF-I expression in recovery patients after combination therapy. METHODS AND RESULTS: Myocardial mRNA levels were determined by real-time quantitative polymerase chain reaction in 12 recovery patients (at LVAD implantation, explantation, and 1 year after explantation). IGF-I mRNA was elevated at the time of LVAD explantation relative to donors, with 2 groups distinguishable: Those with low IGF-I mRNA at implantation who showed significant increase during recovery and those with high IGF-I mRNA at implantation who remained high. Levels returned to normal by 1 year after explantation. Microarray

analysis of implantation and explantation samples of recovery patients further revealed elevated IGF-II and IGF binding proteins IGFBP4 and IGFBP6. IGF-I levels correlated with stromal cell-derived factor mRNA measured both in LVAD patients and in a wider cohort of heart failure patients. CONCLUSIONS: The data suggest involvement of elevated myocardial IGF-I mRNA in recovery. IGF-I may act to limit atrophy and apoptosis during reverse remodeling and to promote repair and regeneration in concert with stromal cell derived factor.

L4 ANSWER 8 OF 42 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN

ACCESSION NUMBER: 2005183688 EMBASE
TITLE: Effects of recombinant human follicle-stimulating hormone on embryo development in mice.
AUTHOR: Edwards L.J.; Kind K.L.; Armstrong D.T.; Thompson J.G.
CORPORATE SOURCE: J.G. Thompson, Dept. of Obstetrics, Univ. of Adelaide, Queen Elizabeth Hospital, Woodville, SA 5011, Australia. jeremy.thompson@adelaide.edu.au
SOURCE: American Journal of Physiology - Endocrinology and Metabolism, (2005) Vol. 288, No. 5 51-5, pp. E845-E851. . Refs: 35
ISSN: 0193-1849 CODEN: AJPMD
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 002 Physiology
003 Endocrinology
021 Developmental Biology and Teratology
037 Drug Literature Index
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 12 May 2005
Last Updated on STN: 12 May 2005

AB We have developed a protocol using recombinant human follicle-stimulating hormone (rhFSH) to induce ovarian stimulation in the mouse to investigate its impact on preimplantation embryo development. Embryos were collected from adult female C57B1/6 x CBA F(1) mice treated with rhFSH (0, 2.5, 5.0, 10.0, or 20.0 IU) or 5 IU equine chorionic gonadotropin (eCG). Embryos were also recovered from nontreated control mice. Embryos were cultured in vitro for 88 h, and the stage of development was morphologically assessed. The allocation of cells to the inner cell mass or trophectoderm of blastocysts was determined by differential nuclear staining. The expression of insulin-like growth factor 2 (IGF-II), the insulin-like growth factor receptor (IGF-II receptor), and vascular endothelial growth factor (VEGF) in blastocysts was measured by real-time RT-PCR. Blastocyst development was reduced in the 10 (72.3 ± 5.1%) and 20 (77.3 ± 5.6%) IU rhFSH groups compared with control embryos (96.7 ± 1.0%). The number of inner cell mass cells was reduced ($P < 0.001$) in the 5, 10, and 20 IU rhFSH groups and the eCG group compared with control embryos. We did not find any effect of rhFSH treatment on IGF-II, IGF-II receptor, or VEGF expression in blastocysts compared with the control group. eCG treatment, however, significantly increased the expression of IGF-II in blastocysts. These results indicate that ovarian stimulation with rhFSH impairs the in vitro development of preimplantation mouse embryos, and these results may have potential implications for clinical ovarian stimulation during infertility treatment and subsequent embryo quality. .COPYRGT. 2005 the American Physiological Society.

L4 ANSWER 9 OF 42 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN

ACCESSION NUMBER: 2005406997 EMBASE
TITLE: Myocardial insulin-like growth factor-I gene expression during recovery from heart failure after combined left

ventricular assist device and clenbuterol therapy

AUTHOR: Barton P.J.R.; Felkin L.E.; Birks E.J.; Cullen M.E.; Banner N.R.; Grindle S.; Hall J.L.; Miller L.W.; Yacoub M.H.

CORPORATE SOURCE: Dr. P.J.R. Barton, Molecular Biology, Heart Science Centre, Harefield, Middlesex UB9 6JH, United Kingdom. p.barton@imperial.ac.uk

SOURCE: Circulation, (30 Aug 2005) Vol. 112, No. 9 SUPPL., pp. I46-I50. .
Refs: 30
ISSN: 0009-7322 CODEN: CIRCAZ

COUNTRY: United States

DOCUMENT TYPE: Journal; Article

FILE SEGMENT: 018 Cardiovascular Diseases and Cardiovascular Surgery
022 Human Genetics
027 Biophysics, Bioengineering and Medical Instrumentation
037 Drug Literature Index

LANGUAGE: English

SUMMARY LANGUAGE: English

ENTRY DATE: Entered STN: 13 Oct 2005
Last Updated on STN: 13 Oct 2005

AB Background - Patients who undergo mechanical support with a left ventricular assist device (LVAD) exhibit reverse remodeling and in some cases recover from heart failure. We have developed a combination therapy using LVAD support combined with pharmacological therapy to maximize reverse remodeling, followed by the β(2) adrenergic agonist clenbuterol. We recently found that clenbuterol induces insulin-like growth factor I (IGF-I) in cardiac myocytes in vitro. The purpose of this study is to examine IGF-I expression in recovery patients after combination therapy. Methods and Results - Myocardial mRNA levels were determined by real-time quantitative polymerase chain reaction in 12 recovery patients (at LVAD implantation, explantation, and 1 year after explantation). IGF-I mRNA was elevated at the time of LVAD explantation relative to donors, with 2 groups distinguishable: Those with low IGF-I mRNA at implantation who showed significant increase during recovery and those with high IGF-I mRNA at implantation who remained high. Levels returned to normal by 1 year after explantation. Microarray analysis of implantation and explantation samples of recovery patients further revealed elevated IGF-II and IGF binding proteins IGFBP4 and IGFBP6. IGF-I levels correlated with stromal cell-derived factor mRNA measured both in LVAD patients and in a wider cohort of heart failure patients. Conclusions - The data suggest involvement of elevated myocardial IGF-I mRNA in recovery. IGF-I may act to limit atrophy and apoptosis during reverse remodeling and to promote repair and regeneration in concert with stromal cell derived factor. .COPYRGT. 2005 American Heart Association Inc.

L4 ANSWER 10 OF 42 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN

ACCESSION NUMBER: 2004:52766 BIOSIS

DOCUMENT NUMBER: PREV200400055709

TITLE: Expression of transforming growth factor-beta and insulin-like growth factor in molar and placental tissues.

AUTHOR(S): Pang, Zhan-Jun [Reprint Author]; Xing, Fu-Qi

CORPORATE SOURCE: Department of Obstetrics and Gynecology, Nanfang Hospital, Guangzhou, 510515, China
LAB973@fimmu.edu.cn

SOURCE: Archives of Gynecology and Obstetrics, (November 2003) Vol. 269, No. 1, pp. 1-4. print.
CODEN: AGOBEJ. ISSN: 0932-0067.

DOCUMENT TYPE: Article

LANGUAGE: English

ENTRY DATE: Entered STN: 21 Jan 2004
Last Updated on STN: 21 Jan 2004

AB The semiquantitative reverse transcription polymerase chain reaction was employed to detect the expression of transforming growth factor beta (TGF-beta) and insulin-like growth factor (IGF) in complete hydatidiform mole, normal first-trimester villi, the normal term placenta (after vaginal/abdominal deliver) and the preeclamptic placenta at term. The expression of IGF-I mRNA was seen in all five tissues, but its level was much lower in the term placental tissues with preeclampsia than in other tissues. The content of IGF-I mRNA in villous tissues from molar pregnancy was slightly higher than in normal first-trimester villi. IGF-II mRNA was detected at similar levels in all three sorts of term placental tissues. However, the expression level of IGF-II mRNA in tissues of complete molar pregnancy was significantly lower than in normal first-trimester villi. TGF-beta3 was found expressed in all five tissues, while TGF-beta1 and TGF-beta2 mRNA were not detected. Compared to the normal first-trimester villi, the expression of TGF-beta3 in complete hydatidiform molar tissues was comparatively higher. Furthermore, the expression levels of TGF-beta3 in the preeclamptic placenta and the normal placenta after cesarean birth were higher than in the placenta after vaginal delivery. We concluded that, the change of TGF-beta and IGF expression in placental tissues might be involved in the development of trophoblastic diseases of pregnancy.

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L4 ANSWER 11 OF 42 MEDLINE on STN
ACCESSION NUMBER: 2002698507 MEDLINE
DOCUMENT NUMBER: PubMed ID: 12376212
TITLE: Insulin-like growth factor binding protein-6 inhibits neuroblastoma cell proliferation and tumour development.
AUTHOR: Seurin D; Lassarre C; Bienvenu G; Babajko S
CORPORATE SOURCE: Unit de Recherches sur la Regulation de la Croissance, U. 515, Institut National de la Sante et de la Recherche Medicale, Hopital Saint Antoine, 184, rue du Faubourg Saint Antoine, 75571 Paris Cedex 12, France.
SOURCE: European journal of cancer (Oxford, England : 1990), (2002 Oct) Vol. 38, No. 15, pp. 2058-65.
Journal code: 9005373. ISSN: 0959-8049.
PUB. COUNTRY: England: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200212
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AB In neuroblastoma cells, survival and proliferation are dependent upon the insulin-like growth factor (IGF) system. IGFs actively participate in cell growth, whereas IGFBP-6, is associated with the arrest of growth. With a view to blocking IGF-II action, we produced recombinant human IGFBP-6 capable of binding IGFs with affinities between 1.23 and 6.36 x 10(9) M(-1). Ex vivo mitogenic activities were tested on two human neuroblastoma cell lines, in which 100 ng/ml IGFBP-6 completely abolished the effects of both endogenous and exogenous IGF-II. In vivo, nude mice previously injected with neuroblastoma cells were submitted to either 15 daily injections of 4-20 microg IGFBP-6 or implantation of mini-pumps diffusing 20-100 microg IGFBP-6 over 2 weeks. The result was an average 18% reduction in the incidence and development of tumours. Delivery of the IGFBP-6 via mini-pumps also delayed tumour appearance by 6-15 days. Our results therefore show the involvement of IGFBP-6 in neuroblastoma cell growth, both ex vivo in terms of proliferation and in vivo in terms of tumour development.

University Medical Center, Stanford, CA, 94305-5317, USA
SOURCE: Human Reproduction (Oxford), (Dec., 1999) Vol. 14, No. Suppl. 2, pp. 90-96. print.
CODEN: HUREEE. ISSN: 0268-1161.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 29 Mar 2000
Last Updated on STN: 3 Jan 2002

AB Insulin-like growth factor-II (IGF-II) and IGF binding protein-1 (IGFBP-1) appear to play an important role in paracrine interactions at the maternal-fetal interface in human pregnancy. Patterns of expression of IGF-II and IGFBP-1 at the decidual-trophoblast interface suggest paracrine interactions occur between the IGF-II-expressing invading cytotrophoblast and maternal decidua-derived IGFBP-1. Autocrine/paracrine actions of trophoblast-derived IGF-II may be important in invasion, and for both trophoblast and decidual function. The actions of IGFBP-1 in binding IGF, and as an integrin ligand, suggest it may have multiple roles in the interactions between the invading trophoblast and the maternal decidua. Abundant decidual IGFBP-1 may interact with the IGF-II-expressing, protease-secreting trophoblast to modulate invasion. In-vitro studies of trophoblast-decidual cell interactions in invasion, and clinical observations in a gestational disorder with shallow placental invasion such as pre-eclampsia, have provided new insights into the possible role(s) of IGFBP-1 in trophoblast invasion. The precise mechanisms underlying IGF and IGFBP-1 action at the decidual-trophoblast interface remain to be elucidated. The potential predictive value of serum IGFBP-1 concentrations in pre-eclampsia also remains to be established.

L4 ANSWER 24 OF 42 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN
ACCESSION NUMBER: 1998422531 EMBASE
TITLE: Follicular fluid insulin-like growth factor-I and insulin-like growth factor-binding protein-1 and -3 vary as a function of ovarian reserve and ovarian stimulation.
AUTHOR: Stadtmauer L.; Vidali A.; Lindheim S.R.; Sauer M.V.
CORPORATE SOURCE: L. Stadtmauer, North Carolina Ctr. for Reprod. Med., 400-200 Ashville Avenue, Cary, NC 27511, United States
SOURCE: Journal of Assisted Reproduction and Genetics, (1998) Vol. 15, No. 10, pp. 587-593. .
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ISSN: 1058-0468 CODEN: JARGE4
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
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037 Drug Literature Index
LANGUAGE: English
SUMMARY LANGUAGE: English
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AB Purpose: Follicular fluid concentrations of insulin-like growth factor (IGF)-I, IGF-II, IGF-binding protein (BP)-1, and IGFBP-3 in 57 women undergoing in vitro fertilization and embryo transfer were examined to determine whether levels reflected differences in patients' exposure to gonadotropin stimulation and a diminished ovarian reserve. Methods: Preovulatory follicular fluid was obtained from both gonadotropin-stimulated and unstimulated cycles. Subjects were grouped according to normal or decreased ovarian reserve and whether or not they received gonadotropin stimulation. Results: The mean follicular fluid concentrations of IGF-I and IGFBP-1 were significantly lower in the